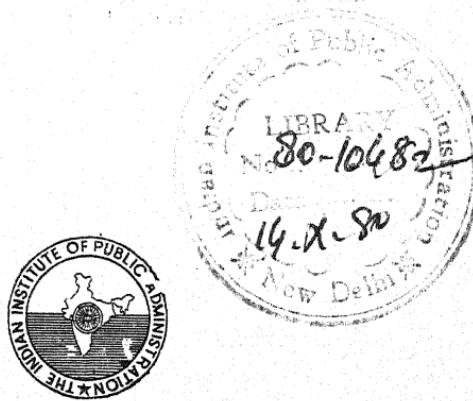


CONTROL OF URBAN BUILDING ACTIVITY

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Edited by
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NEW DELHI

CUS

X 212 370

Jan 2

SEPTEMBER 1980

PRICE { INDIAN : Rs. 80.00
 ABROAD : £ 13.00 or \$ 25.00

FOREWORD

The magnitude and complexity of urban problems in India have not received the attention they deserve from policy makers particularly in the context of the vital role the urban areas play in the socio-economic and political development of the country. If we realise that the government at any level will not have sufficient resources at its disposal for investment in urban development and renewal, it becomes imperative to guide and direct private sector resources for this purpose. One urban sector in which every citizen, rich or poor, has a dominant scope to invest, whatever he can, is housing. The basic human need for shelter is the driving force behind much of the urban building activity which gives shape to the urban environment. Control on urban building activity has traditionally been used to ensure the health and safety of the urban dwellers. In recent years, such control, by directing an orderly urban growth, has assumed considerable significance for the successful implementation of the master plans. Heavy reliance on direction has, however, posed a wide range of problems to urban administrators, planners, citizens and their elected representatives.

In a democratic society, in a matter which touches the common people so intimately, the socio-political context itself becomes the framework within which solutions have to be found. The acute scarcity of housing in cities is giving rise to problems of social tension and slums. Many policies and strategies adopted in the past have not always yielded the desired results, but they do hold lessons, if we look ahead and want to plan for the future. If a positive direction to urban housing is to be given and a massive effort is to be launched, a variety of problems seems to stare at us. The situation, as reflected in the various plan documents, is an index of the changing perspectives of urban housing and its complexities. Both physical and spatial as well as socio-economic issues are involved. The problem of rules and regulations is another important factor. It is a question of how to optimise the

options in the existing situation so as to take a developmental view of the on-going process. The nature of the agencies and organisations entrusted to tackle the problem of housing and the inter-institutional coordination pose a big challenge when programmes are to be set in motion. The differential levels of development of the cities and the future prospects greatly determine the magnitude of and the approach to housing.

The experts in their contributions here have discussed one aspect or the other of the intricate urban housing problem. The inaugural address by Shri J. B. D'Souza sets the perspective for the entire range of topics. The volume brings out vividly how an imaginative and inter-disciplinary approach is called for to cope with the urban housing problem. Any perceptive reader will also realise, while going through the work, how the problem of housing, whether rural or urban, in the country, is some sort of a continuum. No antagonism of any kind, real or imaginary, will be of help. It is the poor and the landless, living in the stagnant villages yesterday, that have become the slum dwellers in cities today with all the attendant problems. Hence a total perspective is to be kept for making a dent on the problem. Taking into account the ecological factors, different kinds of approaches and strategies will have to be designed for rural and urban housing and they should be developed and implemented in a manner that today's socio-economic compulsions are not lost sight of.

The Centre for Urban Studies in the Indian Institute of Public Administration, in collaboration with the School of Planning and Architecture, New Delhi, organised a seminar on 'Control on Urban Building Activities' during March 20-21, 1978 in which a number of papers dealing with these problems were presented and discussed. The seminar was directed by Prof. G. B. K. Rao of the School and Shri D. D. Malhotra of the Centre for Urban Studies. Shri Malhotra has edited these papers and has written the introduction. It is hoped that the volume will be useful to urban policy makers, administrators, planners and all those who are interested in urban development and administration. All in all, this timely volume brings out vividly the need for a continuing social concern about urban housing.

We are grateful to the contributors of the various papers and to the participants in the seminar. I am grateful to Shri D. D. Malhotra for his labour and to Shri N. R. Gopalakrishnan incharge of the Publication Division for seeing this book through in the press.

IIPA, NEW DELHI

T.N. Chaturvedi

(T. N. CHATURVEDI)

Director

PREFACE

Problems of urban development in developing societies are beyond the comprehension of a single discipline, profession or a department/agency of government. They often require a meta-disciplinary approach. One of the ways the Centre for Urban Studies of the Indian Institute of Public Administration, New Delhi, contributes to creating a wider awareness and developing a broader perspective of the contemporary public policy issues and problems in urban development and administration, is through organising seminars for officials belonging to government—Central, State and Local, public agencies and professional and academic organisations. Bringing these officials with diverse background together to deliberate upon the subject-matter of common concern is expected to provide a better understanding of each other's problems and in developing a collective will to resolve them. In addition, these seminars enable us to build a body of knowledge flowing from the interaction of theory and practice and to disseminate it by way of its publication. This volume is the product of a seminar on the 'Control of Urban Building Activity' held at the Institute during March 20-21, 1978.

The subject matter of the seminar has both technical and administrative aspects of great relevance to urban development. Without having sufficient number of good background papers on both these aspects, the purpose of the seminar could not have been achieved. Twenty-two such papers were presented for deliberation and one was received after the seminar. The chapter on 'Introduction to the Seminar' gives the major theme of discussion. To introduce the subject, the paper on 'Development Controls and Building Activity: Urban Development Perspectives' was written subsequently and it is hoped that it will provide the readers with the framework of relevance to the theme of background papers given here after necessary editing. Those who have written these papers for the seminar have a substantial contribution to this work and they

deserve warm gratitudes.

Thanks are due to Prof. G. B. Krishna Rao of the School of Planning and Architecture, New Delhi who spared out of his busy schedule, his valuable time whenever it was needed at the various stages of organising the seminar. My colleague Prof. A. Datta was the seminar's mentor. His guidance in designing its framework and its development was very valuable deserving gratitudes. Special thanks are due to Shri T. N. Chaturvedi, Director of the Indian Institute of Public Administration, New Delhi, for writing the 'Foreword'.

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DEVELOPMENT CONTROLS AND BUILDING ACTIVITY: URBAN DEVELOPMENT PERSPECTIVE

D.D. MALHOTRA

Urban problems considered in the context of pattern of growth and characteristics of urbanisation in India, offer limited scope for homogeneity in policy options in dealing with them. While the factors to be considered for a viable urban development policy are numerous and multidimensional, it is necessary to recognise the framework within which they are considered in the process of formulation and implementation of the policy. Firstly, even though the governmental system and its policies have significant bearing on urban development, a large range of forces which are responsible for giving shape and content to urban scene are outside public control in India. While some aspects of urban development are independent of governmental actions, they nevertheless may be hampered by the existence or non-existence of such actions. Secondly, urbanisation is a complex phenomenon and any attempt to evolve urban policy based on the analysis of urbanisation trends invariably leads to setting broad goals for it on the bases of certain assumptions. The operationalisation of the policy in terms of goal-oriented plans and action-oriented programmes, therefore, largely depends upon how widely are the policy goals and validity of their underlying assumptions shared amongst the decision-makers. Thirdly, the necessary concomitant of the existing political and administrative system in India is the dispersal of authority for policy formulation and implementation in various fields which have a bearing on urban development. Such a dispersal of authority exists not only on account of different levels of government but also due to the functional fragmentation of machinery of government at any one level. Fourthly, while certain extent of functional dispersal amongst task-specific organisations is inevitable for the effective performance of the functions, some of the crucial administrative processes can either aggravate or reduce effects of fragmentation on the emergence of overall

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policy perspectives. The sectoral planning approach and budgetary processes, as they exist today, do not consider urban development as a corporate enterprise within the structure of central, state and local government. At the urban area level, the management system for urban development is fragmented by the scattering of responsibility for urban functions and services amongst a large number of authorities.

Within the above framework, a viable urban policy would require a strong political commitment and an effective institutional base for generating proactive governmental planning and action strategies for urban development. In their absence, the government would continue to react to urban problems wherever they assume crisis proportions, by exercising police powers of state through regulatory measures or adopt, in a piecemeal manner, programmes and schemes to alleviate specific problems.

BASIS OF URBAN PLANNING AND CONTROL

While never before the citizen's dependency on urban services was so crucial to their living in urban areas and such dependency is on the increase, we find the quality of urban life fast deteriorating due to the chronic shortages of all essential services. There is a growing concern that uncontrolled and undirected urban growth will cause a wide range of socio-cultural, economic and political imbalances. It is increasingly being recognised under the circumstances that planned intervention has become imperative to check haphazard urban growth and to provide a more durable response to the urban problems. The effectiveness of the planned intervention, however, depends upon the extent to which the promotional and regulatory policies of various agencies engaged in urban development are mutually supportive and relevant to overall development strategy. It was assumed that City Master Plans would provide the framework for this purpose.

More than 525 Master Plans have been prepared for towns, cities and city regions over the last 18 years but their implementation has remained marginal. Heavily relying upon the physical planning approach, the Master Plans aim at regulating land-uses with a view to influence the design of urban form. City planning is, however, more than land-use planning.

Though it deals with one of the most crucial and important resources, *i.e.*, land, for urban development, yet it offers limited areas of decision-making. At the same time, it creates compulsions for a wide range of policy options in various fields having an impact on urban development. The links between land-use planning and economic and social planning which substantially influence the forces affecting urban form are crucial but missing. On the other hand, the absence of links between land-use planning and planning of urban infrastructural services creates distortions in the implementation of Master Plans. To the extent the development activities visualised under the Master Plans are not incorporated in planning priorities of the various urban agencies, the administrative system's control orientation induced by an organisation culture built around the exercise of police powers of state and the specificity of powers and tasks which the regulatory instruments bring to the organisation structure, generate forces within each agency for securing greater legal and administrative powers over others for advancing its own political and organisational objectives. The need for more powers to ensure compliance from others or for installation of a superagency with requisite authority are the remedies most often suggested by the officials to obtain necessary interagency coordination. The emphasis on coordination secured through authority vitiate the need for securing cooperation by streamlining inter-agency and intra-agency administrative processes and the development of negotiation skills amongst the decision makers at the local level. It is also observed that the regulatory aspects of Master Plans, implicit in physical planning, tend to be vigorously enforced and attract greater attention in determining the success or failure of the Master Plans. A number of State and Union territories have either already enacted or are planning to enact comprehensive legislations to control urban development. The close relationship between the quality of environments and the use of land has been the major premises of these legislations. No doubt such legislations are necessary, but the effectiveness of their enforcement should be seen in the context of administrative system's capacity for the developmental role in meeting the needs of various economic sectors and sections of urban population. Otherwise, they would tend to place

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unrealistically high hopes in regulatory policies for the success of Master Plans. The enormity of violations of development rules and regulations is an indication of the futility of heavy reliance on the regulatory measures alone to achieve the policy goals. Such violations do, however, reveal a broad spectrum of deficiencies which may exist in the development strategy, institutional base for its formulation and implementation and in regulatory policies and their enforcement. Some of these deficiencies in development strategy and institutional base, discussed earlier, are critical to the viability and enforceability of regulatory policies of Master Plans. Since the land is the important factor determining the shape of human settlement, the primary focus of the regulatory policies is on its use and the building activities which take place on it, through the deployment of a variety of development controls.

INSTRUMENTS OF CONTROL ON BUILDING ACTIVITY

For regulating urban development in accordance with Master Plans, apart from taxation and public acquisition of land, the major tools of development controls are zoning regulations, sub-division controls and building codes, byelaws and regulations and laws governing slum and squatter prohibition and relocation. It is through zoning regulations that the growth of an urban area is sought to be organised and systematised. Properly used, zoning can help to ensure an ample supply of urban land as city expands, for the various activities and needs of a community. If adopted as a legal instrument, it has potential to be a strong and powerful tool in implementing plan to ensure an orderly development process. There are different types of zoning but the traditional type and the one widely observed in India, is the use-zoning which attempts to allocate proper amount of land for different uses such as residential, commercial, industrial, recreational, etc., and the optimum location of each use-zone. Each of these zones can be further divided into sub-classifications depending upon the intended intensity of use. For example, a residential zone may further provide areas for single-family (least intense) or multi-family units or in case of an industrial zone, areas may be marked for heavy industrial use (most intensive). The building activity in

each zone is required to be in conformity with the specified use wherever zoning regulations are in force. Apart from protecting environmental aesthetics, it attempts to group certain activities in efficient manner while segregating the unwanted and nuisance uses of land in order to protect health and safety of the residents. Prevention of over-exploitation of land, reduction of building bulk (and thus controlling the density of population and traffic), protection of property values and greater efficiency in public utility and other services on account of uniformity of use are the other advantages claimed by zoning regulations.

Within a zone, sub-division control ensures that the division of raw land before development is in such a way that its layout provides for sewer lines, drainage facilities, water lines, width of road and streets and space for educational, recreational and other public purposes. They are also a means of controlling the density of population in a particular area insofar as they restrict the volume of buildings by prescribing the minimum size of plots. It is the sub-division layout which establishes the character of neighbourhood.

Once the plots are carved out in conformity with zoning regulations and sub-division controls, development on the site is governed by the building byelaws and regulations. For many years, even before the Master Plans, and the zoning regulations appeared on the Indian urban scene, building construction has been subjected to legal control through the enforcement of building byelaws framed under the municipal legislations. Their primary concern has been to protect the health and safety of the dwellers by laying down certain structural specifications for the construction of buildings for adequate light, ventilation and safety. Since the building byelaws require every citizen interested in erection or re-erection or in major alteration, addition and repair of buildings to secure prior approval of the building plan and to obtain its completion certificate from the local body, their importance to the implementation of regulatory policies of Master Plan has substantially increased. This vital instrument of development control is now being used in many cities of India to regulate building activity by prescribing the minimum size of plot, FAR (Floor-Area-Ratio) for ensuring minimum open spaces around a building, set-back (front, rear and side), restriction on the number of storeys and

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height of buildings in relation to road-width, coverage on each floor, size of rooms, size of sanitary conveniences, bath room and their location, entrance, passage corridors, lobbies, stair-cases and their proper lighting, ventilation and means of access, etc. In some cases, the building materials which may be used, are also specified. The scope of building bye-laws and regulations has considerably widened from their original concern with fire protection, structural safety and internal sanitation of a dwelling unit by providing norms and standards in respect of each of the above items, wherever they have been revised to serve the wider perspectives of Master Plans.

EFFICACY OF DEVELOPMENT CONTROLS

Even though there is a general agreement amongst urban policy-makers, planners and administrators that development controls are necessary for an orderly urban growth and development, yet, they have attracted sharp criticism on account of the problems observed in their enforcement. Various instruments of development control require a second look to determine the extent to which they contribute themselves to urban problems. It has been observed that if zoning regulations are not adapted to the local living patterns and to the city's need to maximise its social and economic potential, they can have adverse consequences for city's development insofar as they create separation of people from employment opportunities, reduction in housing supply for poor and increase in their social segregation, strangulation of the informal sector of economy, inequitable distribution of public services and straining of urban transport and traffic management system, etc. In built-up areas of older part of cities, it is virtually impossible to enforce zoning regulation declaring existing uses illegal without incurring heavy social, economic and political costs. For instance in Delhi, it was expected that the provisions of zoning regulations would come into force immediately in respect of industrial non-conforming uses, while the commercial and residential non-conforming uses would continue till the zonal development plans are ready. In pursuance of this policy, the building construction inconsistent with Master Plan was frozen by the refusal of Delhi Municipal Corporation to grant sanction of building

plans even for repairs. But zonal development plans indicating location and the extent of land use proposal in a zone were not prepared for the walled city even though it was divided into 27 zones for this purpose. Enforcement of zoning regulations without zonal development plan which resulted in total stoppage of building activity, could only accelerate the decay of the old built-up area. It was under these circumstances that the Supreme Court of India pointed out that "The provisions of Section 7 of Development Act clearly indicate that Master Plan will give a very broad outline of Delhi as it will look like in future. Though there is an obligation on the Authority to prepare the Zonal Development Plan no such Zonal Development Plan has been prepared."¹ While asking the Municipal Corporation to sanction the building plan, it observed that "... it is certainly not the intention of Development Act that the moment a Master Plan has come into operation, and if it contains a proposal regarding the width that a road should have, all use of land adjoining that road is prohibited for indefinite period."² Since then, zonal development plan in respect of only one zone in the walled city has been prepared and approved.

The suitability of the zoning regulations for the development of older part of the city is increasingly being questioned. In fact, there is a strong need to identify the character of the city where the controls, if vigorously enforced, may prove detrimental to the city's social and economic health. Since the city's development is primarily conceived by the physical planners, it is not without reason that they have, by and large, avoided the developmental problems of older parts of the city. The planners don't appear to have appropriate tools to deal with them. City after city, one witnesses the city's development proudly being demonstrated through the development of new residential, industrial or commercial areas where the effects of development controls are made visible. It does not appear to be the concern of the planners to inquire the interrelationship of the development schemes and city's role, its character, and its strength and weaknesses, and how the older parts of the city fit into the total perspective of city's development. They leave the problems

¹Municipal Corporation of Delhi *vs.* Kishan Dass and Others, 1969 I.S.C.J. 764.

²*Ibid.*

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of older parts to be tackled through the development controls and it is precisely in those areas where the controls create maximum confrontation between citizens and the enforcement agency. It is not, however, suggested that physical planning tools are irrelevant to the development of older parts of the city. If these built-up areas are critical to city's overall development, they require more of socio-economic than physical planning, and zoning regulations should seek relevance to the developmental needs of these areas of older parts of the cities.

The inadequacies of the sub-division controls and building byelaws under municipal legislations for directing and controlling urban building activity within municipal jurisdiction have been pointed out quite frequently. While sub-division controls have been violated most extensively, the Task Force on Planning and Development of Small and Medium Towns observed in 1977 that the weaknesses of building byelaws "... precludes proper development of the city or town either because the byelaws are very sketchy or they do not cover the total concept of city or town development..."³ The Indian Standards Institution while preparing the National Building Code, released in 1970, observed that "(a) The current byelaws, wherever they exist, are out-dated, (b) they do not cater to the use of new building materials and to the latest development in building design and construction technology, (c) they lack uniformity, (d) they are more specification-oriented than performance-oriented."⁴ At many places, due to the internal inconsistencies of the building byelaws on account of ad hoc amendments carried out from time to time, it is virtually impossible to construct a building which does not attract the violation of one provision or the other. The National Building Code was meant to be a model of building byelaws for adoption by the local bodies after adapting it to the local conditions. The primary objective of the Code was to reduce the construction costs and incorporate the latest advancement in building material, design and technology to ensure fire prevention, structural safety, public health and aesthetics. In addition, a few states such as Kerala, U.P. and Gujarat

³Report of the Task Force on Planning and Development of Small and Medium Towns, Vol. II, Ministry of Works & Housing, Government of India, 1977, p. 84.

⁴*Ibid.*

have prepared model byelaws for adoption by their urban local bodies. Special enactments have also been passed by many state governments to regulate the building activity outside the municipal limits. Even after a decade since the preparation of National Building Code and subsequent efforts of state governments, a large number of municipal bodies have yet not revised their building byelaws.

In metropolitan areas and cities which are experiencing rapid population growth, it has been observed that the negative and passive nature of development controls come under severe pressures. The efficacy of development controls in these areas has to be examined in the context of acute housing shortage, particularly for those belonging to low-income group. More than half the population in metropolitan areas is estimated to fall below poverty line and it is increasing quite rapidly. Shelter is a basic human need and the housing backlog in urban areas already exceeds 20 million. Slum settlements, squatting on public land and unauthorised constructions are sometimes diagnosed as problems arising out of legal, organisational and administrative weaknesses of machinery for enforcement of development controls. These problems have, however, to be seen in the context of natural urge of the poor for shelter in response to development controls.

Policies of acquisition, development and disposal of land and mass production of low cost housing can to some extent mitigate the problem of providing shelter for economically weaker sections (EWS) of society. At the same time, if the difference between economic rent and the rent paying capacity of EWS is not minimum, the houses do not stay with those for whom they are constructed. They will find the shelter elsewhere.

It is increasingly being felt that urban planning has been elitist and the major beneficiaries of development controls have been those sections of population which are better-off and belong to the organised sector of urban economy. The practice of not permitting any building activity till services have been laid out according to an approved service plan and unless the building plan is in accordance with the standards laid down under various development control rules, regulations and byelaws, pushes the availability of land and the cost of construction beyond the reach of urban poor. Given the constraint

of acute shortage of resources available for urban development, particularly for housing, it is almost impossible for the government to provide shelter to all its people, especially subsidised housing to the lower income strata of the society. Shelter has to be self provided and approach to shelter provision for poor must consider ways and means of helping them to help themselves and encouraging the utilisation of private resources and energies in increasing the housing supply. Development controls should respond to the needs of community and its capacity to fulfil the needs while ensuring social and economic equity, instead of creating hurdles in the community's effort to satisfy its needs and generating, in the process, an excessive expectation from and dependency on the government to meet the needs.

Suitability of norms and standards laid down under various instruments of development controls for housing construction in developing countries have been frequently questioned. It is pointed out that these standards governing building activity are of Western origin and are the outcome of socio-economic needs which have assimilated the advancement of building design and technology and are shaped by the resources available in the Western societies. "The Western educated elite has developed a technical perception of what ought to be rather than a realization of what has to be. Their 'tunnel' vision of technology plays a significant role in standard setting in developing countries."⁵ The standards are elitist and are meant for those who have enough funds to invest and do not take an overall view of the capacity of the people and government to produce shelter. Nor do they have any relevance to local culture, living pattern, resources and experiences available for building design, technology and construction. Although the poor, who constitute a vast majority, are priced out by the standards, yet if they build their own shelter with their limited resources, development controls are enforced to the point of discouraging their efforts. On one side, the standards permit sumptuous and palatial buildings consuming a large amount of scarce land and building material resources, on the other side,

⁵A. L. Mabogunje, J. E. Hardy and R. P. Misra, *Shelter Provision in Developing Countries* (Scope 11), John Wiley & Sons, N. Y., 1978, p. 11.

the 'sub-standard' shelter of the poor is considered a place of germinating social and economic evils and an ugly spot to be removed to protect the health and safety of the community.

The argument that the standards are of alien origin and, thus, should be outrightly rejected in developing countries however, has to be considered in the context of the need for inevitable change in the design, technology and resources for building construction relevant to rural settlement but inappropriate to living in an urban settlement. There is no doubt that the planning for poor requires a reorientation of development controls and evolution of standards which are in consonance with the needs of poor. In India, Central Building Research Centre, Roorkee and Structural Engineering Research Centre, Madras are engaged amongst a large number of public housing agencies, in developing low cost designs. However, it is equally necessary that the development controls which lay down minimum standards for construction of building, should also prescribe and seek severe enforcement of ceiling or maximum standards so as to reduce huge socio-economic stratification arising out of wide differences in size, design, location, internal and external facilities in the shelter of rich and poor and also to make available the scarce building materials like cement, iron, wood, etc., on more equitable basis.

URBAN PLANNING AND BUILDING CONTROL: SEARCH FOR AN APPROACH*

J. B. D'SOUZA

The seminars are symptoms of fairly good evidence of our concern for the conditions of our cities and we believe that our cities are really in a mess. But what kind of mess are we referring to? Are we referring to financial mess in which most of the cities all over the world find themselves? Is it administrative mess in which we find most of our municipalities? Or, is it physical conditions such as garbage lying all around, traffic chaos, etc., for which most of our cities qualify? Are we talking about social mess wherein increasing incidence of crime and feeling of insecurity are noticeable? If we look at the so-called well-planned cities of the West, we find New York is leading in the race towards insecurity, where people find it insecure to walk in the street during day light. We are not really sure what we mean when we talk about cities being in a mess. In that case, we are apt to assume too easily that building control and town-planning will bring us out of the mess and thus arrogate to ourselves the role of city savers too easily. Town planning is only an instrument and that too imperfect instrument for securing a better quality of life in the city. Building control, is apt to be taken as something God given and something which needs to be enforced regardless of the fact that quite often the temptation is to import latest theory from the West in our building control. What are we trying to achieve through these city planning and development control rules? If our endeavour is to accomplish a better life for our citizens, there are two kinds of purposes of control: internal and external. Internal purpose is to maximise convenience to the citizen of a city, while the external purpose is to fulfil the city's role in regard to its hinterland and in regard to the country around it. These two purposes had to inform our activities as town planners. When we talk about cities, external

*Inaugural Address.

purpose is not always before us. Take the example of a small or a medium size town in the middle of a rural area. The role of a small town is totally different from the role of a metropolitan city. Small town really works as a kind of service centre or market centre for the hinterland and unless our planning concept are attuned to that role, we are apt to make a totally unrealistic kind of regulations for that town.

There are host of objectives which the city planning should aim at and quite a few of them are slightly incompatible with one another. The seminar should consider some of the objectives which should inform our formulation of controls. Firstly, there is the objective of efficiency. Does the building control system and the planning system you have, really work? Efficiency is not only effectiveness in the sense of working but also economy. If the city is a trade centre, are there enough provisions for markets and are they properly served? In developing industrial centre, one has to ask: Can the raw materials be brought conveniently? Is there adequate supply of water, power, transport etc.? In considering land-use, is the city planning system economical in the sense of conserving lands? One gets horrified looking at the prodigal waste of land in Chandigarh and Delhi. We are apt to tie ourselves much too rigidly to exclusive zoning. The efficiency consideration would stress that the land-use system should minimise compulsory travel.

The second main objective is the convenience of citizens in respect of lot of things such as safety, security, freedom of movement, access to amenities and shelter, etc., which make a city attractive. We should question whether our regulations provide for pollution free air, ventilation, light and open spaces for recreation. In this context, one has to recall the slum clearance efforts in Madras where the squatter settlements on the beach were removed and the people were resettled in high-rise three or four storied slum tenements. While planner may feel happy about the change, conditions have become horrible for those who live in these tenements. The hutments before were far more hygienic, ventilated and had access to open spaces than the new tenements. We are apt to think too easily that concrete buildings are safe against fire hazards, whereas these hutments colonies are not. While examining the adequacy of arrangements against fire in the tall buildings in Bombay, it was discovered

that fire-brigades could never reach the upper floor. Their ladders were not tall enough and moreover the lift and stairs; though planned according to regulations could become fire traps, since the stairs ran around the lift and if that area was filled with smoke, there was no way for any one to get down. Compared to that, a squatter colony made of inflammable material is much safer.

In order to avoid house collapses, our engineers design houses which have safety factors far in excess of requirements because there may be an earthquake which happens once in a while. The safety regulations should not let us lead to prescribing expensive solutions. Security against crime is another important consideration while designing the regulations. To what extent the planned and expensive colonies are prone to crime against person and property can be borne out by the newspaper reporting of crimes committed in Delhi. It is planned colonies which figure most prominently than the walled city of Delhi. Perhaps town planning we have done so far and regulations and building control rules for its enforcement have been more conducive to insecurity.

Another important aspect is the freedom of moment. Here again, we tend to equate freedom of movement with wide streets wherein cars can move in every direction without any hindrance. Is it really achieving freedom of movement for the vast majority of population? What about adequacy of services to the population in each area and equality of access to amenities? We call a place well planned if people like us in middle classes have reasonable access to water supply, to good sanitation, to roads and so on. Should not we try to plan in such a way that even our poor people have an easy access to all amenities?

Housing for the bulk of our people is another problem we face. Here again we have adopted, perhaps from the West, beautiful standards of housing, standards of safety, ventilation, light—the standards which ensure that no poor man can manage to live decently. We must have houses that are safe, that will never fall even if there is a massive earthquake. We must build houses with concrete and cement, the houses that no body except 10 to 15 per cent of our population can afford. Such building standards would inevitably give rise to squatter settlements. If our city planners are to serve our people, we have to

change our standards so that houses which common man can afford will be permissible, so that cheaper building materials can be used and a house can be built incrementally and not all at once. It is not suggested that we should have ugly cities. However, aesthetics should not be put higher in the list of considerations behind planning since a poor man can not really afford aesthetics. He needs a shelter first. In the same way, our society needs all the other things before it can afford aesthetics. If we can promise all the other things and also have aesthetics, by all means, let us have it. These are the kinds of objectives which should underline our building control, and it is hoped that this seminar will take a critical look at some of the building regulations and town planning practices that obtain in this country.

There is often a great concern about the spade of violations. We are apt to imagine that the worst violations occur in hutment colonies and squatter settlements. In this context, the observations of a study of conditions in the capital city of Columbia, South America are pertinent. The paper documented the relative size of the housing stock and the characteristics of the households in illegal settlements, their living arrangements, and their incomes. It also assessed the impact of housing construction by incremental development in illegal settlements, effects on the families and effects on the physical growth and economic development of the metropolitan Bogotá. The study observed that "In Columbia, as a whole, housing deficit was estimated at 618,000 units in 1970. This deficit may double in the next ten years. Attempts to remedy or even alleviate this situation through the use of traditional building techniques are unlikely to succeed. The costs of input of standard housing units are prohibitive for more than half of the population. The enormous competing claims on scarce public resources do not and probably will not permit subsidised public housing programmes to have more than a minor impact in meeting these needs. A large proportion of the demand for shelter is, therefore, overflowing into so-called illegal settlements that are developing at the periphery of urban area. Nearly half of the Bogotá's families reside in pirate settlements and under no feasible housing and economic policies, the pirate settlements can be checked in the next ten years or so. According to government officials and academic circles, the

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formation and development of squatter settlements at the periphery of large cities pose special problems of major dimensions. They are viewed as an impediment to the pursuits of fundamental objectives of economic growth because of the claims their residents make on scarce resources and because of their presumed threat to social stability. The policy derived from this view seeks to retard the growth of cities, to steer immigrants from large cities to small towns, to encourage industrial deconcentration and to discourage housing construction by or for immigrants and often low income families". Our efforts on policy development on urbanisation are no different than these observations. It would be wrong to say that the growth of pirate settlements hampers the economic development of metropolitan region through misallocation of scarce resources and through inefficient land-use. Housing investment in pirate settlements contributes significantly to capital formation and to employment. They also have a progressive impact on the distribution of wealth and on economising on scarce administrative and organisational resources. It appears that we have not given enough thought to the importance of the housing efforts of our poor people. We tend to rely upon legislation to curb proliferating squatter settlements, and we believe that once we have passed the law, we have solved the problems. In Maharashtra, some years ago, the state government passed a law called Vacant Lands Act, which made the encroachment on public lands a cognizable offence. The government thought that the problem was solved and no more encroachment would take place. But not once since the enactment of that law has anyone been prosecuted for putting up hutment. It is simply not realized that such a law is difficult to enforce because our poor people can afford only hutments.

There is another popular myth that the principal violators of our wonderful codes and rules are the slum dwellers. There are many instances of government agencies being the violators of planning and development rules and the violations by those who are well connected hardly attract the attention of decision makers. Let us not be too quick to blame the ordinary citizen as a violator of building byelaws.

Finally, the planners need to be reminded of the following observations of Jane Jacobs in *The Death and Life of Great*

American Cities:

Meantime, all the art and the science of city planning are helpless to stem decay and the spiritlessness that precedes decay in ever more massive swatches of cities. Nor can this decay be laid, reassuringly, to lack of opportunity to apply the arts of planning. It seems to matter little whether they are applied or not. Consider the Morningside Heights area in New York City. According to planning theory; it should not be in trouble at all, for it enjoys a great abundance of parkland, campus, playground and other open spaces. It has plenty of grass. It occupies high and pleasant ground with magnificent river views. It is a famous educational centre with splendid institutions—Columbia University, Union Theological Seminary, the Juilliard School of Music, and half a dozen others of eminent respectability. It is the beneficiary of good hospitals and churches. It has no industries. Its streets are zoned in the main against 'incompatible uses' intruding into the preserves for solidly constructed, roomy, middle- and upper-class apartments. Yet by the early 1950's Morningside Heights was becoming a slum so swiftly, the surly kind of slum in which people fear to walk the streets, that the situation posed a crisis for the institutions. They and the planning arms of the city government got together, applied more planning theory, wiped out the most run-down part of the area and built in its stead a middle-income cooperative project complete with shopping centre, and a public housing project, all interspersed with air, light, sunshine and landscaping. This was hailed as a great demonstration in city saving. After that, Morningside Heights went down hill even faster.

In contrast to this planning approach, the author points out the orthodox planning reaction to a district called the North End in Boston. "This is an old, low-rent area and it is officially considered Boston's worst slum and civic shame." The author recalls her visit to this area twenty years ago and observes, that

Its buildings...were badly overcrowded and the general

effect was of a district taking a terrible physical beating and certainly desperately poor.

After twenty years, the author observes:

When I saw the North End again in 1959, I was amazed at the change. Dozens and dozens of buildings had been rehabilitated. Many of the small, converted houses now had only one or two families in them instead of old crowded three or four. I looked down a narrow alley, thinking to find at least here the old, squalid North End, but no: more neatly repainted brickwork, new blinds, and a burst of music as a door opened. Indeed, this was the only city district I had ever seen...or have to this day seen...in which the sides of buildings around parking lots had not been left raw and amputated, but repaired and painted as neatly as if they were intended to be seen. Mingled all among the buildings for living were incredible number of splendid food stores, as well as such enterprises as upholstery making, metal working, carpentry, food processing. The streets were alive with children playing, people shopping, people strolling, people talking.

The general street atmosphere of buoyancy, friendliness and good health was so infectious that I began asking directions of people just for the fun of getting in on some talk. I had seen a lot of Boston in the past couple of days, most of it sorely distressing, and this struck me, with relief, as the healthiest place in the city. But I could not imagine where the money had come from for the rehabilitation, because it is almost impossible today to get any appreciable mortgage money in districts of American cities that are not either high rent or else imitation of suburbs. To find out, I went into a bar and restaurant (where an animated conversation about fishing was in progress) and called a Boston planner I know.

'Why in the world are you down in the North End?' he said. 'Money? Why, no money or work has gone into the North End. Nothing's going on down there. Eventually, yes, but not yet. That's a slum.'

'It doesn't seem like a slum to me', I said.

‘Why, that’s the worst slum in the city. It has two hundred and seventy-five dwelling units to the net acre. I hate to admit we have anything like that in Boston, but it’s a fact.’

‘Do you have any other figures on it?’ I asked.

‘Yes funny thing. It has among the lowest delinquency, disease and infant mortality rates in the city. It also has the lowest ratio of rent to income in the city. Boy are those people getting bargains. Let’s see at the child population is just about average for the city, on the nose. The death rate is low, 8.8 per thousand, against the average city rate of 11.2. The TB death rate is very low, less than 1 per ten thousand, can’t understand it, it’s lower even than Brookline’s. In the old days the North End used to be the city’s worst spot for tuberculosis, but all that has changed. Well, they must be strong people. Of course it’s a terrible slum.’

‘You should have more slums like this’, I said. ‘Don’t tell me there are plans to wipe this out. You ought to be down here learning as much as you can from it.’*

It is hoped that the participants will ponder upon these observations and consider during the deliberations in the seminar whether geometrical city planning which makes for pretty cities is to be rethought.

*Jane Jacobs, *The Death and Life of Great American Cities*, London, Jonathan Cape, 1962, pp. 5-9.

INTRODUCTION TO THE SEMINAR

Development controls provide the basic legal tools of controlling urban building activities. These tools have been in use for quite sometime in India. Their relevance has significantly increased for regulating urban growth in accordance with city master plan. However, urban planners, architects, administrators, civil engineers, and officials of urban local bodies individually and sometimes collectively have been facing various problems in formulating appropriate development controls or in their enforcement. To provide a forum to these officials belonging to different levels of government and public agencies engaged in urban development and administration, for exchanging their problems and experiences in dealing with them, the Indian Institute of Public Administration, New Delhi in collaboration with the School of Planning and Architecture, New Delhi, organised a seminar on March 20-21, 1978. The focus of the seminar was on the following aspects of controls of urban building activity:

- (a) Land-use control for built-up area (older parts of the city);
- (b) Building bulk, appearance and shape;
- (c) Squatting on public lands; and
- (d) Enforcement machinery for development control.

The seminar was attended by officials indicated at Appendix I. It was inaugurated by Shri J. B. D'Souza, Secretary to Government of India, Ministry of Works and Housing and valedictory address was delivered by the Honourable Shri R. K. Gupta, Mayor of Municipal Corporation of Delhi.

Shri R. N. Haldipur, the then Director of the Institute, while welcoming Shri J. B. D'Souza and the participants of the seminar observed that the problem of urbanization have haunted the planners, architects, engineers and urban administrators and these problems are assuming gigantic proportions. He hoped that the seminar organised in collaboration with School of Planning and Architecture, New Delhi, would provide a forum for

experts dealing with one or the other aspect of urban administration to discuss some of the basic issues in the control of urban buildings activities. He pointed out that it would be futile to prepare master plans if no attention was given to direct and regulate the activities for its implementation. Quite often, the multiplicity of urban agencies have, in the absence of effective coordination for concerted action, created a confusion in the implementation process. He hoped that the participants would suggest, in the light of their experiences and discussions in the seminar, ways and means of dealing with the problems. He thanked the participants who contributed papers for the deliberation of the seminar.

In his inaugural address, Shri J. B. D'Souza, Secretary to Government of India, Ministry of Works, Housing and Urban Development observes that there is a need to review our approach towards town planning. The present approach has favoured the economically better off and it has left out the urban poor who constitute the bulk of urban population. Further, he emphasises that while formulating city plans, the planners should seek to strengthen the role of the city and to maximise the convenience to the citizens. The development control rules should seek to provide for safety, security, freedom of movement and easy access to amenities to the common man. However, the efficiency in the enforcement of development control, very largely, depends upon the extent to which such rules are realistic. It is necessary to ponder over whether various standards incorporated in building control regulations are such that a common man can afford to construct a house in accordance with these standards. Since the need for shelter is basic, high standards could only promote unauthorised constructions and slums. He observes that tendency to believe that the worst violations occur in hutment colonies and squatter settlements ignores the extent of violations by government agencies and by those who are better off in the society. It is also wrong to believe that slums are impediments to economic growth of the city and they drain away the city resources and hence they should be removed. This view ignores their role and their contribution to capital formation and employment, which, if properly recognised, will provide different policy prescriptions in dealing with slum settlements. He quotes Jane Jacob's observations to

indicate the desirability of alternative approaches to solve the problems of slums and expected that the participants in the seminar should have a critical look at some of the planning practices and regulations for control of urban building activities.

In the session following the inauguration, Prof. G. B. K. Rao presented the Issue Paper. In his paper, Prof. Rao points out that while every one feels the need for development control on account of various reasons, it has assumed a very bad reputation. Proliferation of laws relating to development control, defects in legal tools along with multiplicity of authorities for their enforcement are some of the factors which he highlights as responsible for confusion. The standards adopted under development control regulations and byelaws are obsolete and outdated. The enforcement machinery suffers from a wide range of defects and it is invariably a hot bed of corruption, delays and political interference. Dealing with the problems of squatting on public lands and slums, he points out that the proportion of urban poor has been steadily increasing and unless their demand for shelter is adequately met, these problems cannot be tackled in an effective manner. Apart from emphasising the need for reviewing the urban land development policy, he lays stress on the environmental improvement strategy for dealing with problems of squatter settlement, wherever resettlement involves considerable hardship. While land-use controls have primarily remained effective in newly developed areas, their enforcement in old built-up areas has been found to be extremely difficult. Problems of built-up areas need to be considered in different perspective while designing controls and strategies for their enforcement. Prof. Rao further points out that unless the concepts used in controlling the building bulk are clarified and uniformity adopted, confusion in this area will continue to exist. Regarding the appearance and shape, he stresses the role of Urban Art Commission but feels that their effectiveness in this regard, wherever they exist, needs to be critically reviewed. The enforcement machinery being highly fragmented, it is necessary to ask: who should exercise the development control at local level? Should it be the local body or the urban development authority? He brings out the implications of each choice with a hope that the seminar will suggest ways and means for designing an enforcement machinery which could

be more effective and free from corruption than the present one.

Shri C. S. Chandrasekhara in his paper 'Development Control: Built-up Areas and Mixed Land Zoning' questions the relevance of land-use control for already built-up areas. The existing tools of development control such as zoning of land-use, FAR, height zoning of buildings, etc., are effective only in case of new areas developed on a planned basis. They are inadequate for and ineffective in dealing with built-up areas which require 'not merely land-use control but total control over development and redevelopment that is needed'. Before development control can be exercised, it is necessary that a total pattern has to be envisaged in terms of buildings, width and pattern of streets and activities. He suggests, that the strategy for development control should emerge from predominant use of a given built-up area and stresses the importance of public education and mobilisation of public support as crucial factors in determining the effectiveness of development control in built-up area. Further, Shri Chandrasekhara points out that since development plans have been based on segregated land-use zoning, they have not proved to be good blue prints for implementation. By ignoring the informal sector which comprises in many cases 80 per cent of population of cities and towns, these plans have been subjected to criticism of being elitist in character. Consequently, they have been violated. In India, where there is a large number of people who are self-employed and who live and work in their houses, it is necessary to recognise that home can also serve as a work place. To prevent violation, he suggests the change in the emphasis from segregated land-uses to mixed land-uses, which, to the extent possible, should provide for work places near the house and should consider the people in informal sector as the main target group. He presents a new model zoning system along with the details of model land-use zoning regulations with the aim of providing mixed land-uses which are compatible to each other.

In their paper on 'Land-use Control in Old Delhi', Prof. M. Avas and Shri M. Siddique trace the historic geographical and demographic features of Old Delhi to highlight the urban phenomena. The Old Delhi is characterised by heavy congestion

where development efforts in the past have not yielded much results because the total urban perspective has not been kept in view. The authors contend that unless planning is done at three levels, namely : (i) National Capital Region, (ii) Delhi Metropolitan Region, and (iii) Delhi Urban Area, the problems of Old Delhi will continue to be compounded by heavy inflow of rural immigrants and can not be solved through development control.

Dr. Afzal Mohammad presents in his paper 'A Case Study of the Walled City of Hyderabad'. The old city has high residential and population densities. The existing land-use pattern is highly disproportionate and the major proportion of houses are in poor structural condition indicating social and economic backwardness of population living therein. The ownership pattern is most unusual as one-fifth of the residents are neither owners nor do they pay any rent. The substandard nature of houses is partly due to the negligence of owners and partly due to the low paying capacity of the residents. Under these circumstances, how can the control of haphazard growth of substandard houses be checked ? Dr. Mohammad argues that there is need to improve socio-economic infrastructure for creating an impact on urban life within the older part of the city. Determination of a definite role of the walled city in the overall metropolitan growth and urban development, and a redevelopment strategy without affecting its culture and social identity are necessary for bringing harmony amongst different land-uses and for removal of residential congestion through development control.

In his paper on 'Approach Towards Control of Building Bulk, Appearance and Shape', Dr. Ajitha Simha contends that it is possible to consider a scientific approach to total bulk of buildings starting from zoning regulations and covering concepts based on fire safety. In India, while town planning rules take care of zoning regulations and building byelaws regulate development of building on site and total volumes of buildings through the application of FAR, the regulations and building byelaws are prepared and enforced by two different agencies which lack coordination. Zoning regulations have not unfortunately paid much importance to fire safety considerations. If low level fire hazard occupancies are brought together,

the investment in fire fighting could be reduced and more time and effort could be devoted to high level fire hazard occupancies. Indication of such groupings of different fire hazard occupancies are largely given in the National Building Code of India. The combination of zoning regulations and those concerned with fire safety based on occupancy classification and type of construction, appears to be a more reasonable approach in arriving at suitable control of building bulk. Dr. Simha recommends the establishment of laboratories for testing of fire rating of elements and for laying down the procedures for the determination of fire-rating of elements so that they can be classified. Further, he recommends to bring under one agency the administration of zoning regulations and building byelaws. He suggests that the concept of dwelling units rather than the population should be guiding criterion behind the control over volume of buildings in the zoning regulations. The control of appearance and shape of building can be achieved through architectural control rules. For the control on the appearance of buildings in the vicinity of monuments, he suggests the setting up of Urban Art Commission.

Application of intuitive methods in formulating building programmes for major urban centres without any relationship to physical, social and economic determinants are responsible, for not achieving the optimum functioning of such structures in term of quality and quantity. Shri Garg observes this in his paper on 'Optimisation of Nature of Building Designs and Land Uses', and feels that this has led to sprawling developments resulting in exceptionally high developments costs, abnormal distances and lack of environmental coherence. To enable the architects, engineers, planners, etc., to take sound decisions in achieving optimisation in the design of building complexes, Shri Garg formulates a method of treatment of planning data dealing with the interrelationships of various physical and planning parameters to the nature of building developments. He suggests that further studies should be conducted so as to regulate the nature of building developments for better environments and optimum utilisation.

Shri G. D. Karkare, in his paper on 'Squatting on Public Lands' observes that despite all the measures adopted so far, the number of squatters and their problems have increased manifold.

While identifying some of the reasons behind large scale squatting, Shri Karkare contends that the problem is primarily economic and social in nature and unless the interests of EWS (economically weaker sections) of population are kept in view while framing proposals for use-zoning, it can not be mitigated. He argues that, the assistance to slum dwellers and squatters should not necessarily be in terms of finance. In order to provide affordable houses to them, housing projects should be so formulated as to imbibe and reinforce in them the attitudes of self-help and self-reliance.

By scanning through plan documents, official policy pronouncements and recommendations of various committees and working groups, Shri Gangadhar Jha in his paper on 'Relocation of Squatters in Delhi: Quest for a Policy' attempts to identify whether there exists any coherent policy for relocation and rehabilitation of squatters in Delhi. For this, he reviews the implementation of various relocation schemes from time to time and concludes that there does not exist any coherent policy for relocation of squatters in Delhi. The policy has been shifting back and forth in implementation. He, therefore, stresses the need to evolve a definite policy in this regard because of the sheer magnitude of the squatter settlements which has been growing more than twice the growth of population of most of the cities in India. Rejecting the contention that the squatter settlements are 'plague spots', he points out positive contributions of squatters to city's economy and their role in the process of modernisation and social advancement without any institutional assistance. He suggests that any viable policy in this regard should consider the development of National Capital Region and a massive programme of low cost housing properly integrated with residential neighbourhoods to be developed in the national capital.

Dr. V. Jagannadham and Dr. C. M. Palvia report some of the findings of their study of 'Slum and Squatter Settlements in Kanpur (U.P.)'. They find that one-third of city's population live in these settlements and 90 per cent of them are on public lands. Mostly the slum dwellers are migrants and there is a considerable degree of social, cultural and economic homogeneity. House building activities in term of dwelling units is found to be higher in slum settlements than in the rest of the city.

However, they are deprived of basic civic amenities. The authors stress that it is important to control the building activities in the urban area both in respect of affluent and low income strata of the community. The policy thrust should provide short, intermediate and long term action-oriented programmes. Demolition of slums as a short term measure has merely relocated slums elsewhere and therefore should be very judiciously and carefully resorted to. While their redevelopment can provide only intermediate term action, the long term actions, the authors contend, call for integrated urban/metropolitan, regional and area programmes in tune with social and economic development plan with high employment generating focus. The authors give estimates of the money required to deal with slum and squatter problems in Kanpur and identify the sources of funding. They feel that unless the estimated amount is invested, the problems of slum and squatting on public lands will continue.

Once the need for city planning is accepted, the enforcement of development control assumes importance. Problems of enforcement are highlighted by Shri H. U. Bijlani in his paper on 'Development Controls and Implementation Machinery'. Urban growth in India poses enormous challenges to the urban planners and local governments who have wide variety of development controls at their disposal to influence the urban environment. Such development controls, Shri Bijlani observes, are complicated and cumbersome and they require an elaborate administrative machinery for implementation. Further, administrative problems of development control emanate from the fact that the organisation has adopted a procedural approach in dealing with changes occurring in its environments. Restructuring the work allocation or redistributing the authority in response to the problems of enforcement often provide limited capacity to deal with the changes. Apart from the technical and economic viability of controls and rigidity and wide variations in standards adopted, major impediments in their enforcement also emerge on account of ineffectiveness of local governments, political interference, outdated procedures and lack of agencies for resolving local conflicts. Shri Bijlani suggests measures for revision of strategy of development controls and for strengthening the enforcement agencies and stresses the need for a regional approach and periodic review of area plans and regulations to

deal with a dynamic situation.

In his paper on 'Machinery for Development Control', Shri Deva Raj examines the viability of administrative organisation at the local level for exercising development control. He feels that the traditional municipal organisation is not prepared legally, technically, and administratively to cater to the new dimensions of development activity. The term 'development' has been used in a very restricted sense by local bodies as they remained occupied with 'erection', 're-erection' or 'alteration' of buildings. This was natural to the nineteenth century concept of municipal functions with stable and fixed jurisdiction free from pressures of growth and expansion. Moreover, executive structure of municipal organisation has created serious problems in effective enforcement of development control. In some municipal enactments, powers of sanctioning building plans or hearing appeals lie with a committee of the council which often have different perspective. Apart from case to case approach, interference and pressures from elected members against demolition of unauthorised constructions drain away the vigours of enforcement. Since panchayati raj legislations do not make adequate provisions for regulating building activities, Shri Deva Raj points out that some states have passed legislations to prevent chaotic development in rural or peripheral areas laying on the urban fringe. Within the municipal jurisdiction, building byelaws constitute the bases for exercise of development control. However, building byelaws continue to be extensively violated. Apart from highlighting the defects in byelaws responsible for their violations, Shri Deva Raj observes that most of the local bodies have to manage with limited technical staff. The task of enforcing building regulations is often entrusted to unqualified 'generalist' inspector, overseers or sanitary staff. In order to overcome the difficulties of non-availability of technical staff and to secure development through proper regulation and control, the state governments have resorted to the setting up of special authorities. Though such authorities are also intended to overcome jurisdictional and other administrative problems faced by local bodies, they exist only for a few cities leaving the rest of urban areas to be managed by local bodies. In order to strengthen the local bodies, Shri Deva Raj suggests the constitution of a separate state

cadre of Town Planning Officers for municipal authorities who should be responsible for exercising development control. Another aspect of the weakness in the enforcement of development control is the legal provisions regarding stoppage and demolition of constructions in violation of statutes and byelaws. In addition to increase in powers under law for demolition of unauthorised constructions, it is suggested that the party obtaining the 'stay' should not be allowed to continue with the construction.

Shri G. C. Mathur in his paper on 'Inadequacies in Building Regulations for Effecting Control of Urban Building Activities' attributes uncontrolled building activities in urban centres to the absence of a comprehensive policy for urbanisation, land-use and housing, specially for low income group. Consequently, the measures adopted to regulate urban building activity have proved to be far from adequate. He describes the defects in municipal building byelaws and stresses the need for their rationalisation. To permit innovation in building activities the emphasis should be on performance concept. Since the existing building byelaws and the provisions of National Building Code do not cater to the needs of the poor, there is a strong need to evolve guidelines for low income group housing. Further, Shri Mathur suggests that in order to assist the common man in building his house in conformity with building byelaws, the municipal administration should provide 'type' designs of houses to suit various plot sizes. If the house builder adopts the design, need for seeking approval from municipal administration could be done away with.

In the absence of urbanisation policy, Shri D. D. Malhotra in his paper on 'Development Control: Some Problems of Enforcement' points out that it would be difficult to rely on micro level regulatory tools of development control in order to direct urban development. The planners and the urban administrators need objective framework for sound formulation of plans and effective implementation of development controls. Moreover, unless the demand of people for various uses of buildings is met, they will continue to construct and use the buildings to meet their needs even if it involves violation of building byelaws and other regulations. The enforcement machinery will continue to be ineffective even if it were to be staffed by technically and administratively

competent personnel so long as it is expected to enforce the development controls against the tide of basic human needs. He also highlights other problems of enforcement and suggests necessary measures for strengthening the municipal administration in this regard.

Shri M. K. Balachandran in his paper on 'Development Control: Some Legal Aspects' finds that a wide range of powers to regulate development already exists in municipal enactments, but these powers have not been found effective because most of the local bodies have not made use of the powers for various reasons, the most important of which is the casual and indifferent enforcement of the available provisions. Improvement Trust Acts were brought in to deal with the inadequacies of municipal enactments and for their enforcement, Town Planning legislations enacted by some of the states have given additional powers to planning authorities including urban local bodies for the preparation and enforcement of various planning schemes. Apart from various types of planning laws, Shri Balachandran observes, there are other legislations such as Slum Clearance Acts, Housing Boards Acts, Building Repairs and Reconstruction Acts, Regulation of Building Operation Acts, Periphery/Ribbon Development Control Act, etc., which deal with one or the other aspect of development control. A survey of these legislations will indicate that there are more than enough laws for exercising development control. But still they do not appear to have the desirable effect. Each legislation, Shri Balachandran points out, has been enacted for the requirement of a specific situation or problem without taking into consideration its impact on the organisations functioning under other legislations already existing in the area. Multiplicity of authorities set up in piecemeal manner and without examining their repercussions on the already existing ones, have created problems of conflict and coordination amongst them and have resulted harassment to citizens. In this respect, Shri Balachandran recommends the action of Maharashtra Government in consolidating the laws relating to housing, repairing and reconstructing dangerous buildings and carrying out improvement work in slum areas. He stresses the need to remove the deficiency noticed in many legislations in respect of powers, responsibilities and resources of the organisation not being matched so as to enable them to deal

effectively with development control problems.

The need to educate people and those who take decisions on their behalf is stressed by Shri K. Thomas Poulose in his paper on 'Problems of Development Controls'. Even if the planners succeed to provide right amount of land for each use in the right place through mechanisms ensuring people's participation, planning will be a futile exercise if there does not exist the determination and zeal in self discipline to ensure the following of guidelines and directives envisaged in the plan. The pitiable fact of development controls, Shri Poulose observes, has been that in a majority of cases the selfish claims of individuals are upheld against the dictates of plans and the interests of the community. It is subsequently complained that the plans have failed because the planners failed to formulate realistic and practicable plans. While recognising the need to integrate economic planning with physical planning, it is suggested that a serious analysis of the accomplishment of development plans is called for.

The relevance of existing administrative structures and procedures of municipal government for better utilisation of talent of specialists such as architects, planners or engineers is questioned by Shri M. S. Mehta in his paper on 'Enforcement of Development Control: An Alternative Approach'. The present system of obtaining sanction of building plan is time consuming and it results in enormous wastage of resources all around. As an alternative, Shri Mehta suggests that we should, at least on experimental basis, leave the architects, the builders and the owners to construct their houses within the framework of building byelaws and zoning regulations, requiring only completion plan to be submitted to the approving authority. Any violation should warrant severe action not only against the owner but also against the designer and the builder. This measure alone, Shri Mehta contends, will bring the violations to a level far below than what it exists to day and it will, at the same time, ensure better utilisation of resources.

Shri C. Mozumdar observes in his paper on 'Land-Use Control and its Enforcement in West Bengal' that the state government's involvement in land-use control is quite substantial since the local bodies have not yet accepted land-use planning as an important exercise. Development control in any planning

area generally presupposes the existence of a physical development plan, but in West Bengal, Shri Mozumdar points out, law imposing restrictions has been applied almost throughout the state before any development plan has been prepared for most of the areas. Relevant provisions of the Calcutta Metropolitan Planning Area (Use and Development of Land) Control Act, 1965 are discussed to bring out the kinds of functions the enforcement machinery is supposed to discharge and the problems of enforcement. Apart from laxity and shortage of qualified manpower in enforcement, Shri Mozumdar observes the absence of a machinery for initiating legal action after serving the notice on defaulters. It is generally found that since the prosecutors not belonging to enforcement machinery are not familiar with housing codes, building byelaws and other development control regulations, the prosecution, if launched, is adversely affected. It is also worth considering whether planning laws in India should incorporate similar provisions available in USA under which any private citizen can initiate legal action requiring the enforcement machinery to act according to the provisions of law. In case they are incorporated, the enforcement machinery would be under enormous pressures to be effective and efficient, while it may also lead to a rapid increase in the problems of enforcement as well. Pointing out the inadequacies of the administrative set-up at the state level, he observes that while at the district level, the district magistrates are appointed as controllers for the purpose of enforcement, they are non-technical persons and there is no mechanism whereby they could obtain planning advice from persons who have knowledge of planning in that area. Shri Mozumdar suggests that the development and changes in use of land should be left to the forces of demand and supply and the control should be minimum to the extent it is necessary to prevent grossly harmful development. The adoption of committee system for citizens' participation in development planning and control and restricting the role of elected officials to approving of general policies are suggested by him.

In U.P. there are various legislations which provide control on urban building activities. While discussing the salient features of these legislations, Dr. K. Sreeram in his paper on 'Control of Urban Building Activities in Uttar Pradesh', observes the lack

of uniformity in some of the crucial definitions. Moreover, the loss of regulatory powers of local bodies has created many sources of conflicts between them and the various agencies set up under these legislations. While the removal of inadequacies of municipal enforcement machinery has led to the creation of different agencies, the desirability of overlooking the role of local bodies is questionable.

The salient features of Development Control Rules which form part of the development plan for Greater Bombay prepared under the provisions of Maharashtra Regional Town Planning Act 1966 (the earlier Bombay Town Planning Act of 1954) are explained by Shri M. G. Vartak in his paper on 'Development Control in Greater Bombay'. It is felt that the Development Control Rules which came into force on 9th February, 1967, are not comprehensive. They are required to be used along with the building byelaws of Municipal Corporation of Bombay. Despite the elaborate machinery for enforcement of development control rules in Municipal Corporation of Bombay, it has not been possible to prevent the growth of slums because of acute shortage of housing. Nevertheless, the efficiency with which building plans are sanctioned and unauthorised constructions are detected has substantial bearing on the control of building activity within the city. Shri Vartak welcomes the recent attempts for standardisation of building byelaws and development control rules in Maharashtra and feels that the standardisation is likely to contribute substantially to the removal of various deficiencies at present being felt in the exercise of development control. With the setting up of Bombay Building Repairs and Reconstruction Board, there has been a conscious attempt to secure structural upkeep of old dilapidated buildings in the city. It is performing a vital role in the improvement of city's environments.

The mushroom growth of unauthorised colonies in Delhi is the outcome of its population increase even beyond the figure projected for 1981 under the master plan and the consequent decline in housing supply. Shri J. D. Goyal and Shri B. B. Nanda in their paper on 'Unauthorised Constructions and Control of Urban Building Activities in Delhi' further observe that given the existing trends in population growth of Delhi, it will not be possible to provide houses to meet the requirements.

Development Controls, however, are still needed. While the Delhi Municipal Corporation Act provides a wide range of powers for their enforcement, it has not been possible to exercise such powers to prevent or remove unauthorised constructions in view of the liberal granting of 'stay orders' by the courts, non-availability of police help, and the frequent criticism of public and their representatives whenever action is taken. It is suggested that carrying out of unauthorised construction should be made a cognizable offence and penalties should include a term of imprisonment. Simultaneously, it is necessary to change the provisions of Delhi Master Plan and byelaws so as to permit more intensive use of land to increase the housing supply within the reach of common man.

In his paper on 'Control of Urban Building Activities in Amritsar', Shri Gurpratap Singh discusses the exercise of development control in Amritsar city. He argues that the problems of older part of the city cannot be solved without the enforcement of land-use control and the strategy should be to shift non-conforming uses to their respective use zones and to redevelop older parts through conservative surgery. No land-use control, however, is practised in Amritsar city due to absence of statutory support. Some development controls are being enforced under Municipal Corporation Act, Town Improvement Act and the Development of Damaged Areas Act. Municipal building byelaws are unable to ensure the control over land-use while Improvement Trust enforces development control only in areas falling under their schemes. Development controls are also provided under the Housing Board Act, Scheduled Roads and Controlled Area Act, and Urban Estate Act. Dispersal of development controls amongst various agencies and lack of coordination amongst them have adversely affected the enforcement capacity of each agency. It is suggested that acquisition, development control and registration of land sales should be brought under a unified set-up or alternatively, a suitable mechanism for coordination amongst these agencies should be evolved. Also, a comprehensive town planning legislation should replace the existing laws and byelaws which have created excessive fragmentation of development control and in the accountability for their enforcement.

While tracing the legislations dealing with control of building

activities in the city of Mysore, Shri S. D. Syiem in his paper on 'Municipal Enforcement Machinery: Mysore City' explains the experiences of the Mysore Municipal Corporation. Shri Syiem observes that unauthorised constructions in the city are, by and large, confined to squatter settlements and direct action to remove them is difficult because it becomes politically and socially a sensitive issue. However, if no action is taken, such a building activity brings down the standards of the city and gives rise to congestion, unhygienic conditions, crime, tensions and social problems in the city. It is necessary, therefore, for the enforcement machinery to have an effective system of detecting deviations and of taking action in time.

ISSUES IN CONTROLLING URBAN BUILDING ACTIVITIES

G. B. KRISHNA RAO

SIGNIFICANCE OF POLICE POWER

The police powers exercised by the state over the citizen's right to property can be traced back to the nuisance doctrine and was originally limited to the goals of public safety, public health, law and order. In recent times, the scope of the police powers has widened considerably so as to include aesthetic as well as spiritual values. Judge Douglas observed "the concept of the public welfare is broad and inclusive . . . the values it represents are spiritual as well as physical, aesthetic as well as monetary. It is within the power of the legislature to determine that the community should be beautiful as well as healthy, spacious as well as clean, well-balanced as well as carefully patrolled."¹ The primary purpose of development control in human settlements has been traditionally taken to be to promote the health, safety, morals and general welfare of the community.

For centuries together, human settlements have grown organically subject to control by the community, originally exercised without any statutory backing but later according to law. A city is often not the product of a pre-ordained plan but reflects the net result of multifarious decisions taken in respect of individual sites by several citizens, architects, engineers, firms and public authorities at different points of time.

The significance of development control in our country lies in the fact that, during this century, the growth of towns and cities has been influenced more by the enforcement of municipal enactments and building byelaws and, in some cases, due to the activities of the improvement trusts rather than by implementation of master plans, which are, relatively speaking, a recent phenomenon after 1960. A Town Planning Act comes into operation only when statutory planning schemes are finalised and got sanctioned; until then, reliance has to be on municipal act,

¹*Berman v. Parker*, 348 US. 26 (1954).

building byelaws and zoning laws for regulating urban growth.

MAJOR PROBLEMS OF DEVELOPMENT CONTROL IN INDIA

The development control in our urban areas presents a dismal scene of blackness in enforcement, flagrant violations of rules, rampant corruption, protracted delays and political interference with the enforcement machinery. In fact, the development control has earned a bad reputation for urban planning in our country.

An attempt is made below to sum up the major problems in controlling urban development activities in our country:

- (i) Existence of multifarious and variegated legal tools relating to development control having overlapping jurisdiction and, at times inconsistent provisions.
- (ii) Existence of dual control by the local body as well as the development authority or the improvement trust, in areas falling under notified schemes, leading to inter-organisation conflicts and hardship for the citizen.
- (iii) The standards laid down under rules and bye-laws are either obsolete and outdated in view of the advancement in construction technology and changes in standards and styles of living or they are often based on ideal situation and do not cater to the needs of the lowest income group, which constitute the majority in urban areas.
- (iv) The provisions in some of the byelaws, relating to development control have no relevance to pattern of indigenous growth in older parts of the city where a conglomeration of land uses exists.
- (v) Flagrant violations of rules are a matter of frequent occurrence. There is a considerable slackness in enforcement of the rules. Unauthorised constructions or those in violation of rules often occur with the connivance of inspection staff.
- (vi) Protracted delays in disposal of building application and prevalence of corruption generally among the inspection and clerical staff often promote unauthorised construction and uses.

- (vii) Non-detection of unauthorised constructions in the initial stage itself and lack of prompt action to nip them in the bud are generally the features of the enforcement machinery which deals with unauthorised constructions and violations of the rules with characteristic slackness inertia and delays with occasional spurts of drastic action. The enforcement machinery suffers from utter inability to eliminate or shift non-conforming industries or to mitigate their environmental nuisance. Often unauthorised new constructions are camouflaged to make them look like old structures.
- (viii) Interference by the elected representatives in the enforcement of rules and regulations against unauthorised constructions and colonies.
- (ix) Indiscriminate issue of court injunctions against prosecutions or demolition, or collection of compounding fee do not appear to act as a deterrent to unauthorised constructions and violations of rules.
- (x) No consideration is often given to the aesthetic aspects or visual quality of the development permitted due to absence of elevation controls and three dimensional models.
- (xi) Absence, in general, of conservation measures for places or buildings of special architectural or historical value and also of restrictive measures on developments in the vicinity of historic monuments or buildings of special value.
- (xii) Ineffectiveness of periphery control measures (if any) to control developments on lands lying outside municipal limits.
- (xiii) Absence in many cities of a decentralised structure of enforcement machinery through creation of zonal offices with delegated powers so as to bring the system closer to the citizen..
- (xiv) Inspection staff in local bodies which constitute the enforcement machinery, often are lowly paid and have low technical qualifications, thus lacking in adequate appreciation of goals of development control and a sense of purpose.

PROLIFERATION OF LAWS RELATING TO DEVELOPMENT CONTROL

The following list of enactments dealing with development control in our urban areas will amply demonstrate the first two problems stated earlier

1. Municipal Act.
2. Town Planning Act.
3. Public Health Act.
4. Places of Public Resort Act.
5. Building Bye-laws.
6. Sub-division Regulations.
7. Zoning Byelaws.
8. Master Plan (carries the force of a statute if sanctioned under an Act).
9. Town Planning Scheme or a Zonal Development Plan and Regulations (carry the force of a statute).
10. Urban Land Ceiling and Regulation Act 1976 (imposes restrictions on plot size, plinth area, etc.).
11. Urban Development Authority or Improvement Trust Act.
12. Housing Code (exists in a few metropolitan areas).
13. Periphery control Act (e.g., Town Periphery Control Act, U.P. Regulation of Building Operation Act and Punjab Scheduled Roads Act).
14. Restriction of Ribbon Development Act.
15. Fire Safety Regulations.
16. Urban Art Commission Act (extended to a few cities).
17. Tree Preservation Act (exists in a few states).

Faced with such an array of enactments, the intending developer and the practising architect or engineer is baffled to know whether the proposed development would contravene any rule or byelaws. Even the planning officials and the members of the elected body are not fully aware of all the powers they possess for regulating urban development and some of the statutory provisions (such as relating to prescribing street elevation or prohibiting huts and godowns in specified areas) remain unutilised. This situation has arisen due to the

fact that apart from a indigenous practice, we have inherited a colonial system of development control (e.g., municipal acts, building byelaws and the town planning acts were largely based on the British statutes). After the advent of the Delhi Master Plan, prepared with the assistance of Ford Foundation experts, the concept of zoning was imported into our urban scene without any critical evaluation of its overlapping provisions with building rules (e.g., with respect to building height, setbacks, coverage etc.) or of the modification needed to the concept to suit our situation (e.g., mixed-land uses). However, certain other American practices such as the housing code and performance standards for industries as a part of the zoning law are yet to find wide acceptance in our country.

Development control rules should be simple, straight forward and concise. The present situation in our country hardly satisfies this criterion. There is need to codify, amalgamate some of the enactments and eliminate overlapping and inconsistent provisions. The Bombay Development Control Rule, which combines within a single enactment the land-use proposals of the master plan, zoning laws, the building byelaws and sub-division regulations, deserves to be emulated by other local bodies in the country.

Some of the major issues in development control relating to the themes selected for the seminar are now briefly discussed.

Land-use Control for Old Built-up Area: Major Issues and Suggestions

Indian cities normally have two distinct parts, *viz.*, the older indigenous part and the 'Anglicised' planned part. Often the railway line or the trunk road separates the two areas, which are entirely different in physical pattern and character.

The older part of the city, which in some cases is or was surrounded by a wall, is the product of organic growth over several centuries in the pre-industrial and pre-car era and is distinctively in the Indian urban tradition. The 'chowk' or the core of the older part becomes the downtown or the old city centre for the entire city. This old city presents a picture of high congestion, narrow and informal street pattern and a conglomeration of uses. The buildings are normally of 2 to 3 storeys height and commercial activity, including wholesale trade,

thrives alongside major streets and, at times, even in the lanes. There is remarkable regimentation of trades along some streets and this is something difficult to attain even with enforcement of zoning laws. There is horizontal and vertical mixing of uses, primarily between residential, commercial and industrial uses, e.g., commerce on ground floor and residence in the rear or on upper floors and industry at times in the rear. Often traditional industry of household type flourishes in the older parts of the city. In fact, the older parts of the city bustles with life and vitality during day and night due to such a conglomeration of uses and this is sadly lacking in more recent developments.

A recent survey conducted by the postgraduate students of the School of Planning & Architecture, New Delhi, in 1977 (see annexure for details) in Panipat has revealed the following interesting facts on the structure of its older parts:

- (i) Residential use constitute as much as 83.44 per cent of the older city area as against 40.36 per cent in the city.
- (ii) Commercial and industrial uses occupy 6.12 per cent and 2.2 per cent respectively in older city as against 4.22 per cent and 17.68 in the entire city.
- (iii) In the older city, 17.6 per cent of the working force is engaged in household industry and only 9 per cent is engaged in the organised industry.
- (iv) As much as 36.3 per cent of the working force is engaged in trade and commerce as against 26.8 per cent in rest of the city.
- (v) As far as income levels are concerned, the residents of the older parts are badly placed in comparison with those in rest of the city. 48.5 per cent of workers in older part earns less than Rs. 300 p.m. as against 33 per cent in the rest of the city.
- (vi) The older parts lack in parks and playgrounds though, they are better off in terms of availability of educational facilities as compared with rest of the city.
- (vii) Structures often have a central courtyard used for outdoor living or handloom industry. Commercial uses are normally on front side (ground floor), residence on upper floors and handloom industry on the rear side.

In the above circumstances, it would be absurd to think in terms of rigid segregation of uses for older parts of cities as is normally contemplated under the zoning laws. The ideal standards pertaining to coverage, height of building and room dimensions as incorporated in such laws have little relevance to such areas.

The solution to problems of older parts of the city lies in:

- (i) introducing traffic management measure such as one-way streets, creation of pedestrian precincts, etc.;
- (ii) decentralisation of activities like wholesale trade in grains, vegetables and iron hardware from the old city to suburban areas;
- (iii) discouragement of further concentration of population by imposing restrictions on coverage, height of structures;
- (iv) evolving land-use controls which provide for mixed land-use pattern rather than rigid segregation of uses.

Squatting on Public Lands

The rapid expansion of urban population is witnessing migration of persons from rural areas into urban areas without any skill or steady employment. Besides, about 70 to 80 per cent of urban population has an income of less than Rs. 250 p.m. Hence, the rural migrants and the urban poor that cannot afford an accommodation on rent or buy a plot are left with no alternative but to squat on public or private lands. The land disposal policy through auction adopted by development authorities has further aggravated the problem in several cities. For instance, the Delhi Development Authority had made available 14,095 developed plots to the public till 1976. Of these, only 12 per cent was given to the low-income group. Its policy of auction of sites at exorbitant prices has led to a tremendous inflation of land prices and rents. Hence, it is not surprising that there were about 7 to 8 lakhs of people squatting in Delhi in 1975.²

Demolition of squatter settlements presents a formidable task in a democratic set-up in view of political pressures and

²Howland Many, "Delhi's Large-scale Land Acquisition and Development Policy", *Journal of Urban and Rural Planning Thought*, January 1975.

interferences. In Delhi, the removal and rehabilitation of about 7 lakhs slum dwellers and squatters to outlying areas could be achieved in recent period since it was done during 'emergency'. But a lesson has been learnt that in rehabilitating squatters, the need for a proper home-work relationship should not be lost sight of. The problem should be handled with humanitarian consideration and the dictum 'prevention is better than cure' should not be lost sight of.

Quite often, environmental improvement might be an appropriate strategy for such squatter settlements. If the master plan had shown such lands for public purposes or non-residential use, the plan should be reviewed for suitable modifications unless strong reasons exist for retaining the proposals. There is need for an adequate supply of developed 'sites and services' at a subsidised cost or 'Janta-type' of housing on long-hire-purchase terms to cater to the needs of lower income groups. The standards in building rules, relating to room size, provision of separate kitchen or bathroom or even latrine have no relevance to the squatter settlements. The rules should provide for minimum restrictions (such as coverage) for areas, designated for housing of the weaker section of the community.

Control of Building Bulk and Appearance

Building bulk is often controlled through restrictions imposed by the rules on coverage, building height, set backs, and floor area ratio or plot ratio. There is some confusion due to use of different concepts like plot ratio, floor space index and floor-area ratio in different cities of our country. There is need for a critical evaluation of each of these concepts so as to find out which one suits our urban situation. It is necessary to consider the extent to which the control of building bulk through these measures at times leads to a monotonous type of development. Should the regulation of development in a central area be based on a three-dimensional model for the proposed development of the area?

In almost all our urban areas, the appearance of buildings is not controlled at all as street elevations have not been prescribed and the colour and texture of building materials to be used in proposed construction is never verified.

Urban Arts Commission which is expected to be the

custodian of urban aesthetics, becomes, in actual practice, often another hurdle to be overcome by the developer. Conflicting opinions between the Commission and the local body or the city development authority are not infrequent as the experience in Delhi shows. The Commission should be consulted with regards to developments proposed in select areas of special value or in the vicinity of monuments.

Enforcement Machinery

A major issue for consideration is whether it is desirable that local bodies should continue to be responsible for development control or whether it is preferable to entrust this work to some other agency like the urban development authority or a government department. The protagonists of the latter approach argue that local bodies are not suitable agencies for development control since they are seething with political interferences, corruption and protracted delays. They also plead that the local bodies should take decisions on policies and byelaws but leave the day to day task of enforcement to some other agency. On the other hand, the supporters of the first approach would argue that if you take away urban planning and development, water supply and drainage and development control from the local bodies and entrust these tasks to other special purpose agencies, then what would be left for these democratic bodies to perform? Entrusting development control to urban development authorities may also result in their becoming too much preoccupied with development control work, which gives them influence and pecuniary benefits, and consequently less attention would be devoted by them to urban planning and development.

The inspection staff of local bodies are lowly paid and they hardly possess technical qualifications. The structure and grades of pay for the enforcement staff should be revised and upgraded so as to attract better qualified personnel to these posts. Special training programmes on rudimentary principles of urban planning and goals of development control should be organised for the benefit of these personnel.

In most of our cities, enforcement staff work under the supervision of the municipal engineer and, in a few cities under city architect. In the local bodies of the southern states of India, there is a long tradition of appointing town planning officers.

It is desirable that the local bodies in the rest of the country and particularly those in larger cities should appoint a town planning officer who could be entrusted with the development control so that planning objectives are not lost sight of in this work. Alternatively, guidance must be provided by state town planning official located at every district headquarters.

Dual control by local body as well as urban development authority in notified scheme areas leads to more harassment, corruption and delays as far as the citizen is concerned. There is no reason why after a scheme and its byelaws are finalised, the enforcement of the same could not be left to the local body.

Prosecutions in cases of unauthorised constructions are not effective. Apart from the fact that litigations are often time consuming, the ease with which the court injunctions are obtained, make the enforcement machinery totally ineffective during the period. Even in the cases of successful prosecutions the fines imposed are so nominal that they hardly act as a deterrent for the further commission of the offence. The statute must provide for minimum penalty in addition to the maximum. There should also be scope for summary trial for quick disposal of cases.

In larger cities, enforcement machinery should be decentralised and adequate powers should be given to zonal offices of the local body so that they are not only easily accessible to the citizen but also are better places in regard to detection of unauthorised constructions and uses and control over the building activity.

In conclusion, the need for devising an enforcement machinery which can be more effective, free from corruption and efficient than the present one in our local bodies can never be over-stressed. The development control rules should be made simple, straight forward concise and overlappings and inconsistencies as between the various related enactments and rules should be eliminated. The standards contained in the rules should have a rational relationship with the living pattern and affordability of the urban poor.

SOCIO-ECONOMIC AND LAND USE STRUCTURE OF OLDER PARTS OF PANIPAT TOWN

The note serves as an illustration of the physical and socio-economic characteristics of the older parts of an Indian city. Panipat, a historic town in Haryana, is situated 89 km. north of Delhi on the G.T. Road. In 1971 the town had a population of about 88,000 people and was classified as an industrial-cum-commercial town.

Rich agricultural lands in the surrounding region find market in the city, resulting in 6 grain and vegetable mandis. Panipat is well-known for its handloom products which are exported to a number of countries. Woollen blanket industry occupies a prominent place in the economic structure of the town.

As per the Socio-Economic Survey* about 95.3 per cent of the households in the old town are Hindu, 74 per cent of population of the old town is migrant, majority of them being migrants due to the partition in 1947. Most of houses in the older part of the city constructed by the Muslims before the partition, were renovated subsequently by the Hindu refugee occupants.

As per survey, the old town recorded the higher sex ratio of 892 females per 1,000 males as against 958 females per 1,000 males recorded for the rest of the city. (The state average for urban areas as per 1971 census is 853 females per 1,000 males.)

The old town recorded about 9 per cent workers in organised industries, namely, manufacturing-processing, etc., whereas about 17.6 per cent workers were in household handloom industry. The corresponding figures of the industrial workers in manufacturing-processing and household—handloom industries in the rest of the city are 16.8 and 9.2 per cent respectively.

Further, the old town has about 36.3 per cent workers in trade and commerce and only about 26.8 per cent in service sector. In contrast, the rest of the city has only 26.8 per cent workers in trade and commerce and about 43.8 in service sector.

These figures are of great interest and bring out the typical

*The note is based on the socio-economic survey conducted by the postgraduate students of Town and Country Planning Department, the School of Planning and Architecture, New Delhi in November 1977.

character of the Indian towns having concentration of trade and commerce in the downtown or old city centre even though such areas lack infrastructural facilities and accessibility.

Another important observation of the survey is that a large percentage (50.5) of workers in the old town are self-employed and only about 38.5 per cent are employees. As against this, in the rest of the city, only 40.5 per cent are self-employed and 53.2 per cent are employees. The percentage of workers in the role of employer is quite small (only about 6 per cent). This also indicates the dominant household handloom industry in the old town.

The survey indicates that the population of the rest of the city is, however, better off as compared to the population of old city with regard to income levels. The income of only 4 per cent households exceeds Rs. 1000 per month in the old city whereas the rest of the city has 13 per cent workers with incomes exceeding Rs. 1000 per month. Further, about 48.5 per cent workers in the old city have incomes less than Rs. 300 per month whereas the rest of the city has only 33.0 per cent workers having incomes less than Rs. 300 per month.

LAND-USE PATTERN

The old part of city situated on a high mound has been rebuilt on debris of centuries. The urban form is typical of other Indian old cities. Grown organically on a pedestrian scale, this part of the town has narrow, winding streets, inaccessible to modern modes of traffic. Even in the natural process of development, a hierarchy of road pattern is evident. The most prominent is the Insaar Bazar with 30 feet right of way which forms the spine of the old town and the main commercial street. The street pattern emerges as a series of successive rings emanating from the oldest part of the town, i.e., the Fort following the natural slope of the ground and tending to link up with the regional roads. A thinning of the intensity of commercial activity is evidenced outwards reducing from the main roads outwards. Nodes of commercial activity form at intersection of major roads.

While the commercial activity is maximum along the main roads, the household handloom industry is evenly scattered

over the entire old town reflecting the principal activity and also the balance between the work-living relationship. Lack of any open spaces, however, tilts the work-living-recreational relationship. Areas of organised open spaces are lacking but such nodal points which are created at the chowks also serve as important social meeting places. The courtyard serves as open spaces at the dwelling level.

The mixed land-use results in high intensity of activity and the area is alive and bustling even at late hours.

As the figures in Table 1 indicate, public facilities have become available as and when the need arose and they got located in residential areas without having premises designed for them resulting in less percentage of areas under public facilities. Residential use occupies the largest percentage of the area—twice as much as in the entire town. The densities obtained are between 200-250 p.p.a. Commerce occupies the next largest percentage and is more than the average for Indian towns. Thus, residential and commercial uses become inefficient because they leave hardly any area for other land uses.

MIXED LAND-USE

While the broad land-use pattern has been discussed earlier it would be worthwhile to elaborate now the process of intermixing. While the prevalent thinking advocates segregation of land-use, a closer look at the old town reveals the advantages of mixed land-use. The intermixing of residential and commercial activity, typical of any old town, is predominantly along the major streets of the town. The most predominant mix is of residential with commercial use. Commercial activity on the ground floor with household handloom industry in the rear and residence on the upper floor is a common feature of the town.

Most of the handloom activities in the town are in the form of reeling, spinning, dyeing, etc., carried out by the women in their homes. This aspect has an advantage for the women to utilise their spare time in a productive manner.

In spite of lacking infrastructure with regard to accessibility, the wholesale trade in the form of mandis and wool markets have prospered in the old town. It is worthwhile to note here

TABLE 1 LAND-USE PATTERN OF PANIPAT TOWN

Land-Use	Area in acre	Panipat (old Town)		Panipat, (Entire Town) 122 Indian Town*	
		Per cent of total area of old town	Per cent of total Dev. area	Per cent of total Dev. area	Per cent of Dev. area
(1)	(2)	(3)	(4)	(5)	
Residential	252	83.44	40.36	47.90	
Commercial	18.5	6.12	4.22	3.20	
(i) Predominantly commercial area with residential mixed use	10.0	—	—	—	
(ii) Commercial (not mixed with land-use)	4.5	—	—	—	
(iii) Predominantly residential area with commercial activity	4.0	—	—	—	
Industry (mixed use with residences in Panipat old town)	7.0	2.3	17.68	6.80	
Public/Semi-Public Parks	10.0	3.3	6.79	14.5	
Playgrounds	1.25	0.4	12.6	6.20	
Roads	8.0	2.6	15.10	13.60	
Vacant	5.0	1.6	12.25	7.80	

SOURCES: 1. Panipat Field Survey by Students of T.C.P. Department, School of Planning and Architecture, New Delhi, November 1977.

2. S. K. Kulshreshtha, *Urban and Rural Planning Thought*, Vol. 11, No. 4, October, 1968.

that the intermixing of land-uses described above have not been problematic in themselves. However, the change in modes of transport and the requirements of these activities have resulted in the inaccessibility of the work centres thereby affecting their efficiency. Inadequacy or absence of municipal services has resulted in unhygienic conditions in the old town. Due to the complexity of the problems, it is seen that the planning efforts to-date have utterly disregarded the realities of the old town and have made proposals not commensurate with the existing mixed land-use pattern and character of the town.

Structural Condition and Maintenance

A survey of the building conditions shows that majority of the structures (Table 2) are permanent and double-storeyed. A part of the old town at the edges appears as temporary construction and poorly maintained.

TABLE 2 STRUCTURAL CONDITION OF BUILDINGS

Structural condition	Percentage of total area		
	Pucca	Semi Pucca	Kuchha
Level of maintenance	Good	Fair	Poor
	83.28	13.98	2.74
	38.74	54.35	6.91

About 80 per cent of the structures are owner-occupied and this aspect is reflected in the good maintenance of the structures. Any urban renewal scheme must take cognizance of this fact.

Though the new development is comparatively well-planned, the social facilities, especially educational, are still lacking. In case of old city, there is a high degree of congestion, lack of recreational facilities but it is better off in educational facilities. The congestion is partly conducive to bringing about social cohesion and also suits climatic requirements. Another typical character of houses is generally a central courtyard with the homes surrounding it and generally, the courtyard is used for

multipurpose activities serving the purpose of living room, dining-area, common sitting place, etc. The yard is also used for the household handloom industry. Thus, the old Panipat city serves as an excellent example of growth in the Indian urban tradition.

DEVELOPMENT CONTROL—BUILT-UP AREAS AND MIXED LAND-USE ZONING

C. S. CHANDRASEKHARA

LAND-USE CONTROL IN BUILT-UP AREAS (OLDER PARTS OF THE CITY)

In discussing land-use control in built-up parts of the city, an initial paradox has to be cleared. What is the relevance of land-use control in an area already built up and wherein land-uses already exist perhaps for a very long period? If it is not going to be effective, why talk of it at all. In order to explain this apparent paradox, it is necessary to state the problems facing the old built-up areas of the city and the alternatives which we have before us to resolve them.

Firstly, the older parts of the city which are mostly built-up, were suitable for a level and pattern of activity that existed at the time it was built. Narrow streets, small squares, two and three storey buildings, road drains, rudimentary lavatories, etc., faced no problems initially and in fact met adequately the demands of those days. However, with the emergence of automobiles and increase in population, new activities to provide employment came into existence. The pattern of the old city could not cope with the new demands and patchwork improvements such as paving of streets have not been able to meet the requirements of more intensified use. Further, because of the demand for more space for carrying out trade and other activities, old buildings got slowly rebuilt, more intensively used with hardly any open space. The environmental conditions started deteriorating and traffic bottlenecks became chronic. It is at this juncture some control over development has been found to be necessary and it is not merely land-use control but total control over development and redevelopment that is needed. Therefore, land use control should refer not to land use only but to total development control. It is in that enlarged context that we should discuss the problem.

The tools that we have presently for development control,

namely, zoning of land use, FAR, covered area, height zoning of building, etc., serve quite efficiently in the case of new areas developed on a planned basis. When we come to apply these tools to existing built-up areas, their inadequacies become very apparent. In the built-up areas, reduction of the covered areas has limited applications as most of area would have been built-up to 100 per cent. It is only when a 'total' redevelopment of any section of a built-up area is taken up; that reduction in the covered area is conceivable and this rarely happens.

• FAR is difficult to apply in the old part of the city where the buildings are at different level with mezzanines, attics, and covered courtyards. Insistence on set-back from the road with a view to provide for widening of the road will mean total demolition of frontages of buildings which is not easy to carry out and arouses a lot of public opposition.

Thus, the commonly used development control measures have been found to be ineffective in built-up areas and, therefore, the built-up areas have been re-built and renovated within the present structural framework often without any permission and a *fait accompli* accompanying situation exists. As a result of this process the problem of the built-up areas, whether it is in regard to traffic congestion, incompatible mixture of uses or fire hazards, get more complex. If we are to prevent this from happening and find an acceptable solution to the problems, our methods of development control in built-up areas have to be quite different to the ones that we are adopted in the newly developed areas.

Firstly, it will be necessary to determine what would be the pre-dominant use in the built-up areas that should definitely remain and should be appropriately provided for. If it is to be a mixture of residential and commercial uses, which is normally the case, then the area would have to be conceived in terms of a mixed residential-commercial development with the residential component probably going to the upper floors and the lower floors being used for commercial purposes.

Once the use pattern is determined and accepted, a new type of circulation system would have to be evolved keeping in view the constraint of the present width of streets and their narrow winding characteristics. Efficient articulation of movement for commercial purposes has to be assured so that commercial

activities can proceed without any kind of bottlenecks. This will require new classification of roads; e.g. roads suitable for pedestrian movement only, roads suitable for rickshaws and scooters, road suitable for tongas and small motor-cars, with one way movement and so on. New definitions of functional roads has to be evolved and it will be necessary to separate movement of goods and people through traffic control devices eliminating likely bottlenecks either in the movement of goods, vehicles or people.

Further, it is necessary to ensure that the people who reside there have minimum amenities available. It is impossible to provide open spaces and playgrounds, etc., according to the norms that we use in the new areas. There has to be a compromise. Perhaps playgrounds have to be provided outside the built-up area for use by the school children and adults residing in the built-up areas. Certain other amenities which do not require open spaces such as clubs, libraries, structures for cultural activities, could be ensured within whatever space becomes available.

It is not possible to apply any kind of a general rule or law for redevelopment of the built-up areas. Each area has to be seen in regard to the existing economic and social fabric which should not be destroyed in the process of redevelopment.

Thus, in the built-up areas, before development control can be exercised, a total pattern has to be envisaged in terms of height of buildings, width of streets, patterns of streets, and patterns of activities. The control that would be applied would be mostly in regard to buildings, safety, light and ventilation, fire safety, sanitation, etc.

We have attempted an exercise in a built-up areas of Delhi to test the manner in which the type of development control that is suggested above could be applied, it is our experience that unless sufficiently detailed work is done, development controls in built-up areas are bound to fail.

An important element in development control of built-up areas is the education of the public and the mobilisation of public support. Unless the public is fully informed as to what is intended to be done in each areas in terms of amenities, facilities and the adverse effects, if any, on any particular property and the manner of compensation which has to be quite generous

only then public support can be mobilised. As the built-up areas offer unlimited scope for commercial use, there is a tendency to follow a *laissez faire* policy and permit indiscriminate commercialisation. What is not realised is that this would destroy the pattern of land values by shifting the land uses and ultimately the areas would become unstable, defensate and unliveable. This would have to be considered through demonstrations and series of meetings with the people of the area when detailed explanation can be given as to why a certain improvement, even if it means a demolition of a building, is necessary for the whole area and how it would compensate the loss to any individual or individuals. The benefits to a much large number of people has also to be clearly spelt out. Public education and mobilisation of public support is absolutely necessary when we undertake development control in built-up areas.

DEVELOPMENT CONTROL THROUGH MIXED LAND-USE ZONING

Development plans in India have hitherto been based on segregated land-use zoning wherein residential, commercial, industrial, recreational, agricultural and other use zones are kept distinct from each other in order to create healthy environments. At present we have over 550 development plans for urban areas in the country of which a little over 350 are statutory in nature. All these plans are based on the principle of segregated land-use zoning. These plans have not proved to be good implementation documents. Generally, they have been criticised as being elitist in nature insofar as they have ignored the informal sector which comprises in many cases of as much as 80 per cent of the population of cities and towns and who have difficulty in paying for a bus fare and a rent for a shelter and are accordingly unable to travel long distances to work from pretty residential environments to well-planned employment centres.

Thus, despite best efforts within the economic resources of the country, these groups make the plan ineffective by violating all the concepts of planned growth through squatting, etc. One way therefore of mitigating these inevitable violations is by changing the emphasis from segregated land-uses wherein work and home are adjacent to each other to the extent

possible and where the target group is no longer the elite but the large informal sector. From now on, planning would perchance have to emerge with this target group in view and in such a manner that their environment is catered for and improved gradually through modest standards, shelters, means of transport and above all employment within the neighbourhood. It is only through such an objective that control of urban building activities should be viewed whether it be of specifying land-use control for old built-up areas, building bulk, appearance and shape or the enforcement machinery required for development control. To help achieve such an objective, a model mixed land-use zoning is attempted herein.

It has become evident that during the last few years, zoning of land use as practised in India is not compatible with the conditions obtaining in cities and towns. This is true, not only for India but also for other cities in the developing countries of Asia and the Far East. To understand why it is so, we may recall the background under which zoning came to India.

Zoning has its origin in the United States of America. Even today, America does not believe in master plan and development plans but strictly believes in zoning and most cities have zoning ordinances adopted by the city under a State Law. Strangely, the zoning legislations were enacted to protect the interests of developers and real estate agents. When the developer developed high income housing and next to them people built industries or slaughter houses, the land values came down. Zoning regulations were enacted to protect and stabilise land values. In fact it had no environmental objectives when it originated. But subsequently, it assumed an environmental rationale.

Because of its origin, it was necessary to have exclusive zoning, i.e., one use for one zone and further, a superior-inferior grading for zoning. The residential areas became the superior at one end of the scale while at the other end industries, contractors' yards, slaughter houses, etc., became the inferior uses. It was also permitted for a superior use to be put into an inferior zone but not an inferior use in a superior zone—once again to protect property values.

In 1931, Britain enacted Town and Country Planning Law and adopted zoning on the basis of an environmental rationale.

from the point of view of prevention of nuisance and hazardous nature of uses in residential areas. This had roots in sanitary bye-laws of that time. The Town Planning Act subsequently tried progressively to introduce a good rationale in zoning and whatever is practised today is much more refined and well ordered to get a good and healthy environment but the roots being what they are, some of the earlier shortcomings have continued. In fact the garden city movement was a strong reaction to the rigid zoning laws. The twentieth century neighbourhood planning concept adopted zoning to serve its own purpose but while doing so recognized that mixed zoning was unavoidable as in the case of neighbourhood commercial areas, service industries, etc.

In India, the practice we have adopted is a combination of American and British practices, and which has unfortunately the shortcomings of both and the advantages of neither. Some attempts have been made to remove this exclusiveness in each area and to tone down the superior-inferior grading but this still persists. We have recognised that the superior-inferior grading in zoning is a mistake; industry can be located in a very well built residential colony. When technology has advanced sufficiently to see that industrial effluents can be properly treated and controlled, the mixture of land-uses can no longer be considered undesirable. In fact, mixture of land-uses is very necessary when you are thinking of work-home relationship. In India where there is large self-employment with people living and working in their houses, it is necessary to recognise that a home can also serve as a work place and perhaps should be designed as such. Similarly, the commercial and services establishment are part of residential areas and, therefore, will have to be built into them provided their adverse effects on environment is taken care of. However, the type of mixed development that now prevails in parts of Bombay, is not desirable because it promotes strip-shopping, reduced road efficiency, causes a lot of noise and is hazardous to children playing, etc. But it will be possible to design a residential area with factories and commercial establishments within it so as to satisfy the environment requirements fully and at the same time achieve a more satisfactory living ethos suited to Indian conditions.

NEW APPROACH TO ZONING SYSTEM

An attempt has now been made to draw up a new Model Zoning System which recognises basically the following :

- (i) mixed land-use is aimed at and planned for so as to achieve living and working efficiency, optimise land use, eliminate heavy transport costs and bring about some gaiety and life in the neighbourhood;
- (ii) in mixing land uses, compatibility of adjacent land uses is carefully assessed and provided for so as to give flexibility;
- (iii) compatibility is largely dependent on performance characteristic of each use and their impact, adverse or otherwise, on adjacent or nearby land uses; and
- (iv) noxious and hazardous uses are located in areas where they do the least harm.

With the flexibility as the aim, the proposed Model Land Use Zoning Regulations in the annexure indicate only 5 zones, *i.e.*, predominantly residential, predominantly commercial, predominantly industrial, open spaces and parks and predominantly agricultural. Also instead of specifying: (i) use permitted; (ii) uses permitted after appeal; and (iii) uses prohibited, what is now attempted is to specify only (i) uses prohibited and (ii) uses to be allowed after appeal in each of the above 5 zones. Thus uses not specified are considered to be compatible to each other. To support these use zones and use permissible therein; another complementary factor is the intensity of use. Thus, in a predominant commercial area, a high floor area ratio (upto 2.5) would allow variety of uses in one plot, the traffic generation of which would be looked after in the plan. On the other hand, a lower floor area ratio (up to 1.00) in a predominantly residential area would discourage sophisticated commercial and office use in this zone. The proposal aims at a better work-home relationship, involving less commuting to work with prospects of self-contained neighbourhoods with a variety of compatible uses to foster a good environment at all times of the day. It attempts to eliminate the strait-jacket approach as in segregated land-use planning procedures and

practices largely prevailing hitherto.

In addition to the 5 Use Zones listed above, it may be possible that further use zones are required under special circumstances, *i.e.*, 'a predominantly Government Use Zone' in the Capital and major cities. In such cases, the uses prohibited and allowed under appeal would have to be decided on merits in each case.

Annexure

MODEL LAND-USE ZONING REGULATIONS

Predominantly Residential	Predominantly Commercial	Predominantly Industrial	Open Spaces and Parks	Predominantly Agricultural	Remarks
(1)	(2)	(3)	(4)	(5)	(7)
Heavy and extensive industries; noxious, obnoxious and hazardous industries; extractive industries except quarrying of a temporary nature of gravel, sand, clay or stone for purposes of the development of the area.	Heavy and extensive industries, noxious, obnoxious, and hazardous industries; extractive industries except quarrying of a temporary nature of gravel, sand, clay or stone for purposes of the development of the area.	Residential dwellings except those of watch and ward.	Buildings and structures ancillary to open spaces and parks.	Residential and agricultural use in an zone.	Uses permitted except those ancillary to open spaces and parks.
Warehousing; storage of perishable, hazardous and inflammable goods; junkyards.	Hospitals treating contagious diseases or mental patients.	Hotels, boarding houses, guest houses, hostels and caravan parks.	Hospitals treating contagious diseases.	Hazardous industries.	Uses prohibited

'Guide to Industrial Zoning', prepared by the Town & Country Planning Organisation in August, 1976.

Wholesale trade.

Slaughter houses.

Hospitals treating contagious diseases or mental patients.

Forest land; grazing land, of an area exceeding 0.5 hectare.

Slaughter houses.

Dairy and poultry farms; farm houses; animal raising or riding stables; workshop for servicing and repair of farm machinery; processing and sale of farm produce.

Light manufacturing Industries; Light manufacturing Industries; Warehousing; storage of perishable, hazardous and inflammable goods, junk-yards; coal; wood; or stone for hire like taxis

Noxious, obnoxious and hazardous industries; extractive industries except quarrying of temporary nature such as storage of gravel, sand, clay for vehicles on works, gas installations, gas

Buildings and Service and light industries; incidental structures ancillary to uses permitted in open spaces and parks

Sewage disposal works, gas installations,

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Water supply installation, including treatment plants, sewage disposal works, gas installations and gas works, electric power plants.	and timber yards. Polytechnics and higher technical institutions requiring machinery, etc.	poses of development of the area.	poses of development of perishable, hazardous and inflammable goods, junkyards; other shows.	and scooters.	Works, electric power plant, water supply installations including treatment plants, gas circus and other shows.	
Bus and truck terminals/depots; service stations; stands for vehicles on hire like taxis and scooters.	Water supply installations including treatment plants; sewage works; gas installation and gas works; electric plants.	Storage of perishable, hazardous and inflammable goods, timber yards.	Commercial use of transient nature like travelling cinemas, circuses and other shows.	Commercial use of nature like cinemas and other shows.	Hospitals treating contagious diseases or mental patients.	Theatres, cinemas, public assembly halls, cultural centres.
Railways yards, railway station and sidings; helipads; jetties.	Workshop for servicing and repair of farm machinery.	Higher technical institutions with machinery or without machinery.	Restaurants and caravan parks, sports stadia.	Restaurants and caravan parks, sports stadia.	Bus and truck terminals / depots, service Stations, helipads and air strips.	
Commercial use of transient nature like travelling cinemas, circuses and other shows.	Cinemas; public assembly halls; Bus and truck terminals; helipads; jetties.	Sewage disposal works, gas installations, gas works, electric power plan, water supply installations including treatment	Sports stadia.	Sewage disposal works, gas installations, gas works, electric power plan, water supply installations including treatment	Cemetries and Crematoria.	Hotels, motels, hostels and caravan parks.

cultural centres; hospitals and medical centres.	minerals/depots, service Stations.	warehousing, storage of perishable, hazardous and inflammable goods, junk-yards, coal, wood and timber yards.
Hotels and restaurants, motels and car van parks.	Stands for vehicles on hire like taxis and scooters.	Bus and truck terminals/depot service stations.
Retail commercial use.	Railway yards, railway station siding, helipads.	Railway yards, railway station and siding, helipads, dockyards and jetties.
Polytechnic and higher technical institutions requiring machinery, etc.	Sports stadia, public utility installations.	Theatres, cinemas, public assembly halls, cultural centres, social and welfare institutions.
Cemeteries and crematoria.	Schools/colleges/institutions offering general educational courses.	Slaughter houses.
Sports stadia.	Cemeteries and crematoria, dairy and poultry farms, farm-houses, animal raising or riding stables.	Slaughter houses.
Government public utility installations.	Cemeteries and crematoria, dairy and poultry farms, farm-houses, animal raising or riding stables.	Cemeteries and crematoria.
		Hospitals, medical centres, nursing homes, offices, banks.
		Religious buildings; cultural and philanthropic associations.
		Hospitals, medical

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Centres, nursing homes, offices, banks, financial institutions professional business, government offices, public utility buildings.	Commercial entertainment of a transient nature.	Stands for vehicles on hire like taxi or scooter, etc.	Dairy and poultry farms; farm houses, animal raising and riding stables.	Workshop for servicing, repair of farm machinery;	Processing and sale of farm produce.	Floor Area Ratio Up to 1.0 Up to 2.5 Up to 0.5 Does not arise Up to 0.1

M. ANAS AND M. SIDDIQUE

It may be mentioned at the outset that for the purpose of this paper we have taken Old Delhi as comprising of the formerly walled city of Delhi or more precisely city, Sadar and Paharganj areas. This has been done more for the sake of convenience in handling the available statistical data even though the City-Sadar-Paharganj territory does include most of Old Delhi.

There is no dearth of literature on the problems of and prospects for urban planning of Old Delhi. It seems that what is lacking is the implementation of a number of policies and plans. The manner of execution of certain plans in recent years has put further constraints on the future steps.

The purpose of this paper is to emphasize the fact that Old Delhi needs a comprehensive but compartmental planning. It envisages a control of the urban land-use in such a manner as to provide easy living for and social cohesion in the population. The idea of building a new town on the ashes of the old should definitely be abandoned for it is uneconomic, unsocial and even unpolitical.

We may take note, even though briefly, of the historico-geographical background, certain demographic features and some significant urban phenomena of Old Delhi.

HISTORICO-GEOGRAPHICAL BACKGROUND

A triangle of some 180 sq. km. is strewn with old capitals, of which Delhi proper or Shahjahanabad is commonly reckoned as seventh. The nodality of this triangle has been of great significance and consequence in Indian history and we cannot do better than quote Spate in this regard :

(This is) the gateway between the Thar-Aravalli barrier and the Himalaya; the marchland position between the north-west, ever accessible to new waves of invasion and cultural

intrusion, and the shock-absorbing Gangetic plains; the convergence of the routes from the ancient Cambay ports and the Deccan by Rajputana and Malwa. Few sites enjoy such long-sustained significance But not only is the general area thus marked out as the great cross-roads of the sub-continent: the pattern is reproduced in detail by the famous Ridge, the worn and arid last spur of the Aravallis, pointing like a lean but wiry finger straight to the Yamuna¹.

Shahjahanabad was founded by the Moghul emperor of that name (reigned 1628-58) on the low bluff overlooking the Yamuna floodplain, but itself safe from the dangers of floods. Ever since its establishment, it has been growing in size and space, but in recent years only in the size of population. With the passage of time, Shahjahanabad—the walled and planned city—was crowded by inward rural migrants so that it expanded westward, covering the areas which are now Sadar Bazar and Paharganj.

DEMOGRAPHIC FEATURES

Shahjahanabad—which was planned to accommodate about 60,000 persons in an area of about 5.2 sq. km., giving an average density of about 1,150 persons per sq. km.—now accommodates ten times more persons, *i.e.*, about half a million, so that the average density is about 96,150 per sq. km. in general and still higher in Maliwara and Dariba Kalan in particular. City-Sadar-Paharganj which had a population of 715,564 in 1961 (26.92 per cent of total Delhi) had increased to an estimated population of 850,000 in 1977. This ten-fold increase in the total population was largely due to the migratory flow of neighbouring rural population. In 1961, it received about 28 per cent of total migrants to Delhi (355,021 persons). It means that in 1961, roughly half of the total population consisted of migrants. The migrants came from almost all the states of India but largely from Uttar Pradesh (123,261), Punjab (60,573), Rajasthan (21,749), Madhya Pradesh (2,821), West

¹Spate, O.H.K., *India and Pakistan*, London, 1967, pp. 514-2.

Bengal (2,390), Jammu and Kashmir (2,263) and Gujarat (2,259). The process of migration continues and since this is a phenomenon which can hardly be curbed or checked, there is a dire need of countervailing policies and programmes to reduce its burden.

The general sex ratio in City-Sadar-Paharganj is about 776 females per thousand males. According to principal religions, it works out to be Hindu (771), Sikh (834), Muslim (753), Jain (895), Christain (919) and Budhist (950). The imbalances indicate social instability produced by the inflow of migrants.

MORPHOLOGY AND EXISTING LAND-USAGES

Old Delhi, forming the inner zone of Delhi, is characterized by heavy congestions, chaotic land-uses, slums, dark lanes, by-lanes, narrow and uncleared streets and katras. In this zone, residential and commercial areas are intermingled with each other. The increase in population by the migrants has resulted in a severe shortfall in housing. A socio-economic survey of the housing conditions in the walled-city reveals that 66 per cent of the families live in one room, 64 per cent families have no kitchen or veranda, 30 per cent have no courtyards, and 60 per cent are without bath-rooms. Out of 1,240 acres, 48 acres are used for factories of which 21 acres bear industries which are obnoxious or hazardous. Most of the land however, is used for residential purposes. About 10 per cent of the total area of Shahjahanabad is commercial where, in 1961, there were 22,072 business and commercial units but this number had risen to 54,670 in 1971. This net increase of business activities shows that residential houses are being converted into commercial premises.

It has been figured out that in the walled city 443 acres need development while 284 acres need improvement. At least 100 acres are needed for the provision of community facilities, parks and wide roads, schools and open spaces. However, people cannot be moved unless they are provided with new places of work.

PLANNING AND DEVELOPMENT

For the planning of Old Delhi, the measures which have been taken to handle the problems and the actual development which has taken place in the last three decades are considerable by every standard. But in their sum total, they leave the basic problems unsolved and have been aptly described as 'cosmetic treatment'.

One may recall that ever since 1947, plans for beautification and schemes of slum clearance alongside some redevelopment programmes such as those concerned with Dujana House and Jama Masjid vicinity were put across. It was later felt that such patch-works will not do. In 1962, a comprehensive Master Plan was drawn up by the Town and Country Planning Organization for DDA., which envisaged, among other things, the development of Shahjahanabad over a period of 20 years (1961-81).

This plan has not yielded much fruitful result perhaps because it lacks larger perspective. It has been pointed out by Shafi² and others that a fresh Master Plan should be prepared involving the entire National Capital Region to cover a larger territorial perspective and a larger time horizon extending up to the year 2001. It has also been emphasized that while preparing the Plan, each area and community should be treated with care and sensitivity.

Indeed, there is a plethora of suggestions. One writer, Jagmohan,³ considers that Shahjahanabad should be resurrected to become what it was in the past. He has suggested a number of provisions, policies and plans of action to build a second or new Shahjahanabad on Minto Road-Mata Sundari Road Complex. Furthermore, he has suggested for the redensification of New Delhi to reduce the population density and to minimise the socio-economic imbalances between Old Delhi and New Delhi and has proposed the development of Shahdara and a few development projects across the Yamuna. Besides

²Shafi, S. S., "The Unmaking of a City Plan", *The Hindustan Times Weekly*, May, 8, 1977.

³Jagmohan, *Rebuilding of Shahjahanabad: The Walled City*, Delhi, 1975.

these, he has mooted suggestions regarding the functioning of various institutional urban development bodies.

It was in the light of such suggestions that in recent years certain drastic steps were taken such as the demolition of the Turkman Gate dwellings and the resettlement of squatters in far-flung and rather undeveloped areas such as Khichripur across the Yamuna. The social, economic and even political consequences of these actions are there for anybody to see.

Old Delhi is the core of Delhi and in many respects, it serves as the nerve centre of social, cultural, economic and even political life. It is the heart but it is a sick heart. In addition to all the hardships resulting from over-crowding, it suffers from a terrible environmental pollution, industrial wastes such as fly-ash and boiler ash, carbon monoxide from automobiles, smoke and soot from the burning of fuels pollute the air. Water pollution is becoming greater due to the ever increasing amount of industrial waste and human waste. In many areas, noise level exceeds the normal tolerable decibels.

One fact stands out. About half of the population of the area consists of migrants from the neighbouring states. They are generally uneducated and poor. They have, however, established their foothold and cannot be moved out easily in a specified period of time. Nevertheless, attempts can be made for thinning them out.

It may be noted that the City-Sadar-Paharganj area is one of the divisions adopted by the DDA and it has been divided into 27 development zones. This trend of classification shows a basic approach to what may be called city-region approach, which is a sound and healthy approach. In fact, the whole planning should be done at three levels, namely, (i) National Capital Region Level, (ii) Delhi Metropolitan Region Level, and (iii) Delhi Urban Area Level.

National Capital Region Level

The National Capital Region which comprises of the Union Territory of Delhi and eleven adjoining tehsils of Haryana and Uttar Pradesh needs planning in order to reduce the flow of rural migration. Medium-size towns and urban centres should be developed to absorb the rural migrants themselves.

Delhi Metropolitan Region Level

The Delhi Metropolitan Region which includes a number of so-called satellite towns or ring towns, namely, Ghaziabad, Faridabad, Ballabgarh, Gurgaon, Bahadurgarh and Lune. They should be developed as counter magnet to the migratory flow and should be provided necessary infrastructure to achieve this end.

Delhi Urban Area Level

The Delhi Urban Area has been aptly divided into planning divisions and development zones. The urban problems should not, however, be tackled by bulldozing method. The desire to construct on the ashes of the old should be abandoned. The process of urban planning or development should be on a long term basis and this may be achieved through compartmental planning.

As a matter of fact, compartmental planning could achieve the end by discouraging further construction and extension, by improving roads and lanes, katra and streets, by providing under surface drainage and by shifting congested residential houses to new residential complex. If urban developmental bodies adopt a long term policy of development, one day the dream of redevelopment of Shahjahanabad would surely be fulfilled.

Hence, the major argument which this paper seeks to advance is in favour of compartmental planning for the control of land use in Old Delhi. This, however, cannot be done meaningfully and efficiently without taking into consideration the larger territorial perspective which means the Delhi Metropolitan Area and the National Capital Region. It is a two-way traffic, *i.e.*, from the whole to the part and from the part to the whole.

RESIDENTIAL AREAS AND INCIDENCE OF SOCIO-ECONOMIC FACILITIES IN THE WALLED CITY—A CASE STUDY OF HYDERABAD

AFZAL MOHAMMAD

HISTORICAL BACKGROUND

Hyderabad city was founded in 1591 A.D. on the south bank of river Musi. This city was the successor of the fortress town of Golconda which was founded in 1510 A.D. on the north bank of the river Musi, about four miles west of the present city. The city has passed through several historical stages while it was ruled by Qutub Shahis, Moghals and Asif Jahis. From its inception, it has been a capital city and was planned on a grid pattern, consisting of two main roads running E-W and N-S, intersecting at Charminar—the city centre. It has been mentioned in historical records that the main thoroughfares were lined with 14,000 buildings including palaces, residential quarters, shops, mosques, rest-houses, and schools, etc. Each quarter was identified as a zone of specialized functions. The north-western quarter contained royal palaces and state offices; the north-eastern quarter contained the residences of the nobles; the quarter south-east to Charminar was most thickly populated and served more as a suburb where low-paid workers lived. The houses in this part were mostly constructed with mud and bricks and had thatched roofs.

The most significant period of the city growth was between 1725 and 1799, which happened to the early period of Asif Jahi dynasty. During that period, the city had not yet attained high residential density and mostly contained the royal palaces and large *havelies* of the nobles. The marketing activities which thrived very well during Qutub Shahi period had declined. However, it was during this time that the city wall was completed by Asif Jahi-I (1740 A.D.) and the limits of the city were precisely defined. The completion of the city wall gave a feeling of security to the people and thus not only

the population started growing but the bazars also regained new life. By 1798, there were three flourishing bazars and one wholesale district in the city.

The political developments which took place during 1798 and 1874 (such as Nizam's alliance with the East India Company in 1798) resulted in development of Hyderabad beyond the walls, across the river Musi. Once the city developed trends of expanding northwards, the British Residency got strong hold in the functional development of the city and the walled city around Charminar slowly started losing its supremacy.

Due to coming of the railway (joining northern part of Hyderabad with Madras, Bombay, Delhi and Calcutta) and also due to the establishment of a few industries near Secunderabad, the growth of Hyderabad south of the river was practically halted. Although the palaces of Nizam and his nobles were still located within the walled city, the British Residency in the north contributed to significant changes in the growth pattern of the city and added new social values to the city life.

The incident which had catastrophic effect on the walled city was the flood in river Musi in 1908, which led to the decision of shifting the affected population from the north and south banks of the river Musi and rehousing them mostly north-wards. Several state offices were also transferred to the north, which gradually shifted the centrality from the walled city. Subsequently, the nobility was also attracted north of the river and quite a good number of big palaces and *havelies* fell vacant. Finally, the shifting of Nizam's palace in the year 1911 from the north-western part of the walled-city to King Kothi area brought the most deadly blow to the walled-city. This followed a period of large scale shifting of central functions from the walled city to the new city developing in the north of the river Musi. The residential areas within the walled city were completely neglected and most of the luxurious villas of the nobles were in ruins. The moving out of royal families considerably affected the commercial and other social functions in the area. Thus the walled city was left as a jumble of old palaces, *havelies* and other historical buildings.

In course of time, the dilapidated houses were occupied by the people of middle and lower-middle classes, who had either

small business around the area or worked as labourers. The type of social and cultural traditions which had grown in the walled-city could not get mixed up with social dynamism of the new city developing at a rapid rate. With the passage of time, the walls of old city started disappearing and after the Police Action (in 1948) when the Nizam's State merged with Indian Union and a new phase of urban development started in Hyderabad, the remnants of the historic wall also disappeared. Although traces of the wall are no more visible around Charminar, there are still four gigantic arch-gates on the main roads leading east-west, north-south which only signify the entrance from Charminar to the respective functional zones during historic times.

Residential Areas

The walled city has high residential and population densities. The existing land-use pattern is highly disproportionate since residential land-use alone accounts for 56 per cent. In a study relating to the preparation of Zonal Development Plan for the walled city by Hyderabad Urban Development Authority, it was revealed by the housing survey that 54.61 per cent of the total houses were kutcha houses (Table 1). This explains the social and economic backwardness.

TABLE 1 DISTRIBUTION OF HOUSES ACCORDING TO TYPE OF BUILDING MATERIAL

	Per cent
Kutcha houses	54.61
Pucca houses	41.95
Huts	3.44

It is also noticed that 47.7 per cent houses were having unsatisfactory structural conditions (Table 2).

TABLE 2 STRUCTURAL CONDITION OF HOUSES

Type of structure	Percentage of houses
Good structure	10.85
Satisfactory	41.41
Unsatisfactory	47.74

Such houses are mostly located in Shah Ali Banda, Mecca

Masjid Areas, Punch Mahalla and Moti Gali. Table 2 reveals that almost half of the total houses in the area have unsatisfactory structure which is further corroborated by the figures in Tables 1 and 3. The houses are mostly constructed with mud and bricks, or lime and stones. Only about 10 per cent to 15 per cent are constructed with cement and concrete. Another significant feature of the housing is that 79.2 per cent houses have only ground floor. Of the rest of the houses, most of them have two floors only.

The age of the houses varies in different areas but very old houses are mostly found in Chow Mahalla, Punch Mahalla, Moti Gali, and Shah Ali Banda. Table 3 reveals that nearly 50 per cent houses in the area are more than fifty years old and almost one-fifth of the total houses are more than hundred years old.

TABLE 3 DISTRIBUTION OF HOUSES ACCORDING TO THEIR AGE

<i>Age of houses</i>	<i>Percentage of houses</i>
Less than 10 years old	14.83
11-30 years old	24.90
31-50 years old	12.30
51-70 years old	15.78
71-100 years old	12.42
More than 101+	19.77

It has been noticed that in spite of being in dilapidated condition, some of the old palaces and deohries in Punch Mahalla and Moti Gali are still occupied by the people. However, some old palaces like Aaftab Mahal, Afzal Mahal, Tahniyath Mahal and Khilwath Mahal, have strong structures but are not being fully used since the owners have preferred to preserve them as historic monuments.

It is evident from Table 4 that almost one-third of the total houses have floor space of less than 200 sq. ft. These are the houses which are also poor in construction, lack basic civic amenities and are mostly annexed to big *havelies* and palaces. It should also be noticed that about 3 per cent houses which have more than 1000 sq. ft. floor space, represent those of the old palaces and deohries (such as Khilwat, Manjhili Begum-ki-Haveli, etc.) which have been preserved by the owners either

because of their historic importance or because they cannot afford to look after such huge properties.

TABLE 4 DISTRIBUTION OF HOUSES ACCORDING TO FLOOR SPACE

<i>Floor space</i>	<i>Percentage of houses</i>
Less than 100 sq. ft.	18.44
100-200 sq. ft.	14.83
200-400 sq. ft.	37.25
400-600 sq. ft.	18.54
600-800 sq. ft.	5.62
800-1000 sq. ft.	3.43
More than 1000 sq. ft.	2.89

As stated earlier, the houses with less than 200 sq. ft. floor space is about 3 per cent of the total houses. Majority of these houses have only one room. This is corroborated by Table 5 which reveals that the one-room tenements also account for about 28 per cent. This explains the low income levels of the people. In all, about 45 per cent houses have one to two rooms and 20 per cent have five or more rooms. This brings out that the houses are either too small or too big. The smaller ones are those newly constructed either in the vast open-yards of the old *havelies* or on the site of the ruined palaces.

TABLE 5 DISTRIBUTION OF HOUSES ACCORDING TO THE NUMBER OF ROOMS

<i>Number of rooms</i>	<i>Percentage of houses</i>
One room	28.39
Two rooms	17.36
Three rooms	16.64
Four rooms	17.54
Five rooms	7.77
More than five rooms	12.30

A peculiar feature of the walled-city is its most unusual ownership pattern. Table 6 brings out that almost one-fifth residents of the walled-city are neither owners nor do they pay any rent. Most of them have occupied a portion of some big *haveli* for a long-time and continue to live there without paying

rent or having a right of ownership. In some cases, the property is in dispute or under litigation. There are also cases where some Nawabs or Jagirdars had allowed the first generation of their servants or near-relatives to live in certain portions of the *haveli* free of charge; this concession is continued even today. All such residential areas are poor in structural conditions due to lack of proper maintenance of the buildings and exhibit slum-like conditions. The higher percentage of owned houses, which accounts for about one-third of the total, relates to the owners or share-holders of old palaces and *havelies*.

TABLE 6 DISTRIBUTION OF HOUSES ACCORDING TO OWNERSHIP

Ownership	Percentage of houses
Rented	44.48
Owned	35.62
Free occupation	19.90

CIVIC AMENITIES

In general, the level of civic amenities is very low in the walled-city. The most striking feature is that about 44 per cent houses do not have satisfactory ventilation (Table 7) and more than 5 per cent do not have independent kitchen, bath and water supply (Tables 8, 9 and 10). The sub-standard nature of the houses is partly due to the negligence of the owners and partly due to low-paying capacity of the residents.

TABLE 7 DISTRIBUTION OF HOUSES ACCORDING TO VENTILATION

Conditions of ventilation	Percentage of houses
Good	8.68
Satisfactory	47.20
Unsatisfactory	44.12

Besides the higher densities and space-squeeze, lack of basic amenities further aggravates the problem. This calls for immediate attention of the urban planners.

It is gratifying to note that the Hyderabad Urban Development Authority has given high priority for preparation of a zonal development plan for the walled-city.

TABLE 8 DISTRIBUTION OF HOUSES ACCORDING TO INTERNAL AMENITIES

<i>Internal amenities</i>	<i>Percentage of houses</i>
Separate kitchen	41.77
Separate bath	32.73
Independent water supply	45.93
Independent electricity	45.57

TABLE 9 PER CENT OF HOUSES ACCORDING TO CONDITION OF DRAINS

<i>Conditions of drains</i>	<i>Percentage of houses</i>
Open drains	41.59
Covered drains	58.41

SOCIAL FACILITIES

Irrespective of housing conditions, social facilities like shopping, banking, post offices and schools, etc., are more conveniently available to the people of the walled-city. The spatial pattern of these social facilities has made the problems of urban renewal more complex. Table 10 strikingly brings out that, excepting the high schools and places of social gathering, almost all public utility services are available within one kilometre or less. The most significant feature is that primary schools for more than 95 per cent households, shopping facilities for more than 80 per cent households, and banking facilities for more than 70 per cent households are available within one kilometre. This explains the reason why, in spite of low standards of housing and poor conditions of living, the residents of the walled-city do not move out.

Charminar is an important bus terminal. All the localities around Charminar have close access to buses in any direction of the city. Over 55 per cent households find that distance to the nearest bus stop is less than one kilometre; for about 25 per cent one to two kilometres; and only about 20 per cent have to travel two to three kilometres for the nearest bus stop.

For about 50 per cent households of walled-city, the places of recreation and social gathering (like marriage halls, community centres, public meeting places, etc.) are at a distance of three

TABLE 10 ACCESSIBILITY OF HOUSES IN THE WALLED CITY TO VARIOUS SOCIAL FACILITIES ACCORDING TO DISTANCE

Distance from the residence	Percentage of households having facilities of :										
	Shop-ping	Banks	Post offices	Tele-graph offices	Primary schools	High schools	Colle-ges	Recre-ation (parks, play-grounds, etc.)	Cinema houses	Bus-stops	Places of so-cial gather-ing
Less than 1/2 km.	45.03	32.37	5.43	32.55	41.59	15.37	3.44	1.99	33.27	42.32	26.22
1/2-1 km.	46.29	41.05	46.29	18.27	55.33	16.82	45.21	23.33	21.16	13.20	9.04
1-2 km.	3.68	24.77	10.85	12.84	1.81	44.66	30.74	35.27	25.68	24.95	6.33
2-3 km.	—	1.81	21.16	22.78	1.27	23.15	20.61	24.41	19.89	19.53	27.85
More than 3 km.	—	—	16.27	13.56	—	—	—	—	15.00	—	30.56

kilometres or more. This speaks of the congestion and lack of open spaces required for such purposes. It may be mentioned here that in the overall pattern of urban land-use in the walled city 24 per cent land has been regarded as vacant land, but most of this vacant land falls within the compound of big *havelies* or ruined gardens annexed to old palaces, etc. Obviously, it cannot be used for public purposes since it is private land.

RESIDENCE-WORK PLACE DISTANCES

Table 11 has brought out that the persons going to their work places from walled-city can be broadly divided into two groups: (i) those who travel a distance of not more than two kilometres (44.47 per cent), (ii) those who travel distances of more than five kilometres, to reach their work-places (45.29 per cent). Incidentally, the percentage of persons in both the categories is almost equal.

TABLE 11 DISTRIBUTION OF HOUSES ACCORDING TO THE DISTANCE TRAVELED

<i>Distance</i>	<i>Percentage of persons who travel from their residences to work-place</i>
Less than 1 km.	32.35
1—2 km.	12.12
2—3 km.	8.17
3—4 km.	1.53
4—5 km.	1.88
More than 5 km.	43.41

This can be better appreciated when compared with the figures in Table 12.

It can be noticed that the percentage of persons going from their residence to work-place by walk is 46 per cent; whereas the total of those travelling by bicycles and buses together, comes to about 44 per cent. This explains that all those reaching their work-place within two kilometres cover this distance by walk; and all those who reach longer distances, use primarily bicycle or a bus. All these factors strongly reflect the

TABLE 12 DISTRIBUTION OF WORKERS ACCORDING
TO MODE TO TRANSPORT USED

<i>Mode of transportation</i>	<i>Percentage of persons</i>
By walk	46.12
Bicycle	22.00
Bus	21.18
Cycle-rickshaw	5.82
Local train	2.47
Motor car	2.00
Auto rickshaw and others	1.41

poor economic conditions of the people. The type of activity in which the people are engaged is in close proximity. This includes services in the retail and wholesale shops, artisan centres (such as bangle-making, silver-paper manufacturing, bidi-making, etc.) workshops, etc. Majority of the workers travelling long distance are either in the services (such as working in government offices, schools and other institutions) or in trade and commerce.

SOCIAL CHARACTERISTICS

The socio-economic survey has revealed that out of a sample of 576 households, about one-fifth have been found to be settled in the area for over 30 years. Another 20 per cent have been living for 20 to 30 years; and only about one-third have lived for less than 5 years (Table 13).

TABLE 13 DISTRIBUTION OF SINGLE HOUSEHOLDS ACCORDING
TO PERIOD OF STAY IN THE WALLED CITY

<i>Period of stay in the walled-city</i>	<i>Percentage of households</i>
Less than 5 years	32.20
5-10 years	15.90
10-15 years	11.03
15-20 years	9.76
20-25 years	7.41
25-30 years	3.98
More than 30 years	20.43

This pattern is much different from the rest of the city where average period of residence for a family in a particular locality is

5 to 7 years. This explains the traditional attachment of the people with the walled-city and its historic mohallas.

One of the most interesting and significant social characteristics of the walled-city is that in a sample of 526 families, it was found that more than 68 per cent families consisted of 5-10 members (Table 14).

TABLE 14 DISTIBUTION OF SAMPLE HOUSEHOLDS ACCORDING TO THE SIZE OF FAMILY

<i>Members of the family</i>	<i>Percentage of families</i>
2-3 members	7.05
4-5 members	22.42
6-7 members	26.94
8-10 members	27.49
More than 10 members	14.10

This further explains the low levels of social and economic standards. Factors like poor literacy rate (37.43 per cent), lack of opportunities for social development, and poor economy have contributed to high degree of functional obsolescence.

BASIC ISSUES

Having examined the socio-economic structure of the walled-city, several points and issues are raised which have to be carefully examined for a further course of action.

1. To bring about a significant change in the economy of the walled-city by supplementing small-scale and cottage industries, bringing back some of the central functions which it had lost during the last period of recession; and improving the socio-economic infrastructure which will have a deep impact on urban life.
2. To check the indiscriminate intrusion of activities in the old built-up areas and to control the haphazard growth of sub-standard housing all around.
3. To prepare a scheme of urban renewal; and a careful examination and conservation of old palaces and *havelies* before a new pattern of land-use is effected.
4. Preparation of a comprehensive zonal development

plan which should bring about a harmony in different land-uses and remove the residential congestion through development control.

5. Reorganisation of functions and adopting a policy of redevelopment of walled city without much affecting its culture and social identity.
6. To determine a definite role of the walled-city in the overall metropolitan growth and urban development of the twin cities.

APPROACH TOWARDS CONTROL OF BUILDING BULK, APPEARANCE AND SHAPE

D. AJITHA SIMHA

BASIC APPROACH

While preparing the National Building Code of India, we had occasion to examine several foreign codes, particularly from USA, Canada, UK, Japan, Australia, New Zealand and South Africa. We had also occasion to study some of the basic documents prepared in America, particularly on the consideration leading to determination of total volume of buildings, specifically in terms of fire. Reference here is made to the useful publication of American Iron and Steel Institute in 1972 concerning fire safety in buildings. This approach is very much reflected in the officially adopted codes wherein very important recommendations are made regarding the total volume of the buildings based on fire considerations.

In these countries again, the zoning ordinances are also promulgated which again limit the number of buildings on a zoning lot. The concept of floor area ratio is brought in and a close correlation and coordination is established within the office dealing with building code so that consistency is established between the two regulations. It is, therefore, possible to consider a scientific approach to the total bulk of the buildings starting from zoning regulations and coverings concepts based on fire safety.

ZONING REGULATIONS

In India, generally it can be said that the Town Planning Rules take care of zoning regulations and building bye-laws take care of the development of the building within the site and of the total volume of the buildings in term of the permissible FAR for, different types of occupancies. Unfortunately, however, the regulations in either case are prepared by two different

agencies and coordination is not always possible. The zoning regulations through Master Plan would normally consider the land-use pattern and decide upon the different land uses based on several considerations but today, it appears, fire safety aspect is not one of the considerations taken into account. Even in zoning regulations, fire safety becomes an important consideration for the following reasons.

The different occupancies such as commercial districts, manufacturing districts, residential, business, etc., do imply by their very definition different levels of fire load, that is, by the very nature of operations in these buildings, the combustible contents in the building vary in quantity. Because of this variation in the quantity, the fire load itself varies and the National Bureau of Standards, USA, has been able to establish a fairly acceptable correlation between the combustible contents of different materials and the fire load which can be expressed as so many lbs. per sq. ft. of timber. This aspect brings in the question of grouping of occupancies of similar fire hazard which will lead to decisions on even location of fire stations. If low level fire hazard occupancies are brought together, the investment on fire fighting could be reduced to that extent and more time and effort could be spent on high hazard occupancies which can be segregated from low hazard occupancies. Also to avoid conflagration hazard, that is spreading of fire from one occupancy to other, it would be useful to separate them by sufficiently wide gaps and this could be also one of the decisions in zoning regulations. Indications of such grouping of different fire hazard occupancies are already given in the National Building Code of India. This is to a large extent followed in the zoning regulations of other cities in the West. Therefore, in the zoning regulations, fire could also be brought in as one of the parameters for decision on segregation of different occupancies and location of fire fighting services.

In regard to another major aspect of controlling volume of building in the zoning regulations, the concept of dwelling unit is receiving more and more attention. Earlier, population used to be the main criteria in terms of an assumed value of five persons per dwelling unit but in Indian conditions this assumption may not be always valid because of our social habits, joint family system, etc. It, therefore, appears more reasonable to consider

the total number of dwellings because this will have repercussions on services to be made available. These services are in terms of water supply, drainage and electrical installations. Though water supply and drainage is related to the population basis, it is also necessary to consider the capacity of the development to accommodate more and more people. If, therefore, the number of dwelling units are limited, population could be limited to that extent and a reasonable estimate of the services could be obtained based on the number of dwelling units.

FIRE SAFETY CONSIDERATIONS

Fire safety considerations come in, as already explained, as part of building bye-laws or building codes. In the building codes the normal practice is to classify buildings on occupancy basis and the type of construction. The occupancy basis is based on the fire load that is assumed to be in the building and the type of construction would indicate the fire rating of the construction. According to these codes, a combination of these two considerations could indicate the total height of the building and the total floor area to be covered. In fact, the latest codes indicate this relationship in a tabular form. It is pointed out that where the fire load is low and fire resistance rating of the construction is very high, the floor area and the height can be unlimited. This would theoretically mean, therefore, that the total bulk of the building is unlimited. But this is only from the point of view of fire. Other considerations, and constraints will bring down the total volume of the building from an unlimited to within certain limits. Also the zoning ordinance or zoning regulations would indicate the total density which will again bring the level of construction to certain maximum. Therefore, this combination of zoning regulations and regulations concerned with fire safety based on occupancy classification and type of construction appears to be a more reasonable approach in arriving at suitable controls of building bulk. This approach appears to be quite universal in the developed countries. This has also been indicated to the extent possible in our building code. But there is a need to adopt certain other measures such as the establishment of

laboratories for testing of fire rating of elements or establishing procedures for the determination of fire rating of elements so that they can be classified into one or the other type, determination of the combustible contents in buildings through an extensive survey of the buildings in the country, and bringing under one agency the administrative requirements of zoning regulations and building byelaws so that proper coordination could be established between these two. In some cases it is noticed that the building regulations have indications on height and area limitations and some FAR values are also found in the zoning regulations. This leads to an anomalous position and creates confusion insofar as development of the area is concerned.

While rewriting building byelaws in India for some of the cities, an attempt has been made to synthesise this approach on building control both through the development control rules and through building byelaws. But insofar as existing Acts are concerned nothing can be done in contravention of them and therefore detailed exercise is necessary to examine the Acts governing town planning and Acts governing municipal building byelaws so that some of the inconsistencies between them could be ironed out. One of the approaches seems to be to simultaneously develop both development control rules for the city and also the building byelaws so that consistency in approach could be maintained. This has been done in U.P. and Maharashtra.

CONTROL OF APPEARANCE AND SHAPE

Insofar as control of appearance and shape is concerned, it could partially be achieved through architectural control. We have suggested to the state government to set up an Urban Arts Commission which would control appearance of the building, at least in the first instance for large and prestigious buildings coming up in the vicinity of existing monumental buildings. It may not be proper to apply these control to ordinary buildings. However, in the case of new developments, appearance and size could be visualized and controlled in the very first stage because this will become difficult after the development has taken place. We are given to understand that in certain redevelopment schemes this approach will be attempted but it will be very

difficult in view of the existing structures. Redevelopment will, therefore, have to take place over a long period of time, may be in 50 or 100 years.

It has been possible to get an Urban Arts Commission set up in Delhi and its work connected with control of some of the buildings would be of use in developing a proper architectural control in the city. Similar Urban Arts Commissions would be useful in other cities provided the scope is limited to large public building in the first instance because it is not the intention to create one more hurdle in the path of owners of ordinary buildings of getting clearance from the Urban Arts Commission. If this could be successfully brought out, some possibility of architectural control in some of the more prestigious areas of the city could be obtained.

Regarding shape of the building, as already pointed out, bulk as determined by fire safety considerations and zoning regulations would determine the shape. However, from the point of view of elevation, architectural control rules could govern the same. This is a desirable exercise and more and more cities, particularly of tourist interest, should take up this question. To some extent we have been able to bring this to the notice of several agencies connected with this work in different states.

CONCLUSIONS

It appears a little more rational and scientific approach to the control of building bulk could be attempted provided co-ordination could be established between zoning regulations and building byelaws and also if new concepts of determination of total volume of building through fire safety consideration are accepted.

OPTIMISATION OF NATURE OF BUILDING DESIGNS AND LAND-USAGES (IN RELATION TO LIVING ENVIRONMENT AND ECONOMICS OF DEVELOPMENT)

B.B. GARG

Rapid urbanisation, increasing industrialisation, rising economic development and changing socio-economic structure in developing countries have necessitated large scale building activity and urban development projects, thereby, imposing great responsibility on architects and planners to provide functional buildings and optimum land-uses with liveable environment within the economic constraints of such countries. Large building complexes are being planned in these countries in order to accommodate the different activities in the urban environment. But the developing countries are not keeping pace with the demand, and the human settlements are facing acute shortage of buildings for different functional requirements, *i.e.*, commercial, industrial, residential, public and semipublic, etc. The efficient and economic planning of buildings in urban setting demands that these structures function effectively and efficiently in relation to the growing demand of different activities at local and regional levels, and to the changing environmental objectives and economics of development. The building processes involve decisions regarding the location, number of storeys, bulk of built-up spaces, floor area ratio, environmental criteria and quantum of land uses, transportation system, capital and maintenance cost, management and financing system. The application of intuitive methods in formulating building programmes for major urban centres without any relationship to physical, social and economic determinants are responsible in not achieving the optimum functioning of such structures in terms of quality and quantity. Such planning has led to sprawling developments resulting into exceptionally high development costs, abnormal distances and lack of environmental coherence. Under this situation, created due to growing building demand and developing economy, planning programmes should be formulated to provide the

necessary environment and optimum utilisation of resources. This will help in coordinating physical and economic parameters so as to result in the optimum nature of buildings. Determination of optimum intensity of floor area for varying number of storeys and effective architectural planning helps in achieving optimisation in relation to land-use and overall cost. The decision-making in relation to number of storeys and locational aspects of different types of buildings for optimum solution should be guided by scientific studies considering all the aspects in an overall system. Rational decision can be taken in the light of alternative solutions thus arrived at to guide the building activity to achieve optimum solutions in varying situations. The paper provides certain studies and planning data dealing with the inter-relationship of various physical and planning parameters to the nature of building developments so as to enable the architects, engineers, planners, etc., to take sound decisions in achieving optimisation in the design of building complexes.

PLANNING APPROACH

The present trend of providing buildings varies from single storey to multi-storeyed building blocks, depending upon the feasibility of particular form in an urban environment in relation to land-use, social and economic aspects. The vertical versus horizontal buildings are responsible for different land utilisation and intensities of built-up areas, different types of environments and varying costs of buildings comprising land cost, cost of development and construction cost. The decision in selecting the nature of building should lead to optimum solution in relation to land-use and cost under varying situations. The land-use data of varying building development should correlate the various decisions at different levels, *i.e.*, regional, town and local levels, and should result into optimum number of storeys. The economics of development should also correlate the various decisions at different levels, *i.e.*, regional, town and local levels, and should result into optimum number of storeys. The economics of development should also correlate the various decisions at different levels in relation to cost of land, cost of development and cost of construction so as to result into

economic forms of buildings. The superimposition of physical parameters in relation to economic parameters result into the most economical solutions in a particular situation and can form the basis of designing buildings based on the concept of optimisation.

Land-Use and Environments of Building Complex

The decisions regarding land-use and intensities of built-up areas of building complexes are to be related at different levels, i.e., local, town and region in order to achieve a well-coordinated building programme of the region as a whole. The decisions at regional and town levels regulate the building concepts at local level, thereby resulting into varying nature of buildings ranging from horizontal to vertical structures. The practical feasibility at local levels on the other hand affects the policy formulation at city and regional levels. The success of the planning of building complexes depends upon the quantification of different parameters involved in buildings and outline the desirable limits of land-uses and intensities of built-up spaces for varying storeys so as to be suitable for various situations for optimum decisions. The provision of built-up and the open spaces around buildings create optimum environment to the users of each building at local level. The decision at town level deals with the desirable spatial relationship between work centres and town amenities to the housing for the increasing population in time scale. The decision at town level of all the urban centres in a region is to be related to the accommodation of increase of urban population and their activities in a planning area on the basis of optimum development of the region. Rational decisions can be taken in the light of simultaneous parameters at different levels to decide the optimum storey of buildings under different situations.

Land-Use and Intensities of Built-up Spaces of Building

The nature of building blocks (number of storeys) is a function of the environmental standards to be provided at local level for different types of structures. The environmental standards are the indices of human values for providing the desirable living conditions based on physical, climatic, social and visual factors for the users and should be quantified and formulated so as to

different activities and for varying number of storeys. The decision of land-use, densities, floor-area-ratio and coverage in relation to number of storeys can be taken by the following relationship.

Environmental Considerations

The floor area is primarily meant to provide internal spaces for different activities of the users to be performed. These areas are functions of socio-economic conditions of the community and are being formulated in developing countries for different types of buildings by public authorities. The reduction in floor area per person or effective planning of buildings are taken as design criteria for the buildings. The area under walls and circulation both horizontal and vertical should be kept as low as possible constituting about 20 to 25 per cent of the total building area. The open spaces provided with the building blocks are meant to provide sun light, day light and air flow and to cater the other functional and socio-psychological requirements. The standards of open space requirements vary among different regions and countries because of their climatic conditions and diverse social patterns. The desirable range of open space per unit of floor area should be quantified by planning agencies for various storeys for different locations of the country so as to relate the storey number to land-use and densities for optimum environment. The open space per unit of floor area is a function of shape and size of building block, number of storeys and angle of obstruction for guiding the front, rear and side open spaces. Besides the individual open spaces at site level, open spaces in building complexes are also left due to the adoption of a particular pattern, visual reasons and other social requirements which constitute about 20 to 25 per cent of the open spaces provided at site level for a building complex. Any attempt in economising the open space per unit of floor area at cluster level without sacrificing the environmental optimum will result into higher density and minimum land-use. The practice of providing excessive open spaces in clusters disturbs the density achievements in intensive developments. However, the open space stipulations should be taken into account to achieve a good aesthetic layout besides satisfying open space criteria. The values of open spaces for various floor space rate and different number of storeys for

achieving of optimum environments at local level have been worked out for varying situation.

Nature of Building Blocks

The stipulation of floor area per person for different activities and open space per unit of floor area decide the optimum densities in relation to number of storeys within the permissible limits of developmental control (*i.e.*, floor area ratio and coverage). The optimum density determines the land-use for the specific type of developments, quantum of built-up and open spaces. Developmental control, *i.e.*, FAR and coverage are the measures to regulate the nature of development by restricting the maximum intensity of built-up spaces in the form of FAR and minimum requirements of open space in the form of coverage. The nature of development, *i.e.*, number of storeys is a function of physical, economic and aesthetic considerations and is decided by the designer at particular situation. The FAR stipulations decide the densities in relation to gross floor area per person on one hand while the coverage regulations decide the densities in relation to total open spaces per person. Optimum densities are formulated for the desired environmental levels (built-up spaces and open space per person for different types of buildings) for varying number of storeys. The decision regarding the nature of development in relation to density and other parameters, FAR and coverage, can be taken by the following equations :

$$D = 10000 \times \frac{S}{SP+A}$$

$$D = \frac{100 \times F}{A}$$

$$D = \frac{100 \times (100-C)}{P}$$

where

D = Density in person/hectare.

S = Number of storeys.

A = Floor area per person in sq.m. including circulation spaces.

P = Open space per person in sq.m. at cluster level.

F = Floor Area Ratio.

C = Coverage in percentage.

Thus, in a building complex the horizontal versus vertical development effects the physical parameters, *i.e.*, land-use, density and environmental aspects, which are quantified for decision-making. The following empirical expressions were developed for achieving desirable range of densities :

$$G = 100 \times Y \times K \times \frac{S}{A} \times \left(\frac{1}{1 + RS} \right)$$

where

G = Gross density in person per hectare.

S = Storey number.

A = Floor area per person in sq. m.

R = Open space ratio (expressed as a ratio of open space per unit of floor area). These values are 1.0 to 3.0 in low rise, *i.e.*, 1 to 2 storeys, 0.5 to 1.0 in minimum rise, *i.e.*, 3 to 6 storeys and 0.3 to 0.5 in high rise, *i.e.*, 8-12 storeys.

K = Relative efficiency of the pattern which varies from 0.75 to 0.8.

Y = Land-use in net use at local level.

The optimum densities can be worked out for varying floor space rate, optimum open space requirements and land-use allocations. A computer programme was also developed for achieving optimal storey number in building development.

ECONOMICS AND COSTS OF BUILDINGS

In developing countries, Government normally pays large subsidies to bridge the gap between the rent-paying-capacity and the economic rent of the building which is on the high side due to excessive land costs, high development and construction costs. The economic success of a building project depends upon the overall costs of development of a complex and the possible returns based on the quantum of floor area. The entire cost structure and economics of the scheme depends upon the proper balancing of the physical and functional parameters with the development costs, costs of land and the cost of construction. As

such a thorough cost evaluation of different possibilities which satisfy the various stipulations is necessary in order to arrive at some success of the final choice of the nature of building development. A study of these alternatives with due understanding of cost behaviour is essential. The overall cost of building per person or per square unit of built-up area can be taken as a criterion to evaluate the different alternative solutions. The inter-relationships of various parameters are discussed so as to work out the alternate solutions for the selection of optimum nature of development of building for physical as well as economic parameters.

Cost of Land and Cost of Development

The land costs are very vital in determining the nature of development. The variation is very enormous in cities of different population sizes and is a function of location while coming to city level. The land component per unit of built-up area in the building costs should be brought within such limits so as to result the most economical solutions for different situations. In situations having high land costs, the high densities and intensive developments with high rise buildings should be developed so as to result the most economical development. Even the land component compensates the higher cost of development by the formulation of optimum design solutions.

The cost of development is very vital in determining the nature of development and the successive growth of an urban centre in relation to its topography and the increasing population size. The cost of development per person or per unit of built-up area can be taken as a criterion to evaluate the different solutions for varying nature of developments. The cost of development per unit increases with the adoption of low rise development and provision of excessive open spaces due to increased length of public utility services. The comparative values of cost of development per unit should be evaluated for different number of storeys of development for deciding the optimum nature. This would lead to reduction in exorbitant development costs in the planning of urban centres at low rise developments. Costs of development for varying densities, nature of developments and population sizes can guide the formulation of optimum density pattern of urban centres. The development

costs consist of the costs of different services, i.e., water supply, sewerage, electric lines, roads, storm water drainage, etc. The component due to cost of development influences the decisions regarding the co-economics and nature of development. The high development costs for low rise developments especially in major urban centres compensate the high cost of construction due to multi-storeyed building blocks.

Costs of Construction

The cost of construction forms the major component of the overall costs of building and lot of research is being done to reduce the cost of construction by adopting new constructional system. Generally, the cost of construction and internal services go higher while designing more number of storeys. For working out the most economic development, the cost of construction per sq m. should be evaluated in relation to cost of land and cost of development for specific situation. In situation like small urban centres having low land costs and low development costs, the construction costs are the determining factor in decision-making. The comparative costs of construction including internal services have been undertaken by many agencies and a trend in rising of cost in relation to number of storeys have been observed but it is suggested that the cost data of different storeys should be worked out for particular situation so as to have the more realistic cost figures for local conditions.

Overall Costs of Buildings

The overall costs of a building is a sum of construction cost, cost of development including land cost. The varying values of these components under different situations results into the most economical solution. The combined effect of these components for varying number of storeys should be worked out for various situations so as to optimise the economics of development. The following empirical expression was developed for achieving optimum cost in relation to number of storeys :

$$T_s = C_1 \times q + \frac{(LC + LD)}{100 \times Y} \times \frac{(1 + RS)}{(K \times S)}$$

where

T_s = Total cost per sq. m.

C_1 = Cost of construction per sq. m. of single storey.

q = Ratio of construction in any storey to single storey.

The values are 0.9 to 1.1 in 2 to 4 storeys, 1.5 to 1.75 in 6 to 8 storeys.

LC = Cost of land per hectare.

LD = Cost of development per hectare.

The optimum costs can be worked out for varying situations in relation to number of storeys.

CONCLUDING REMARKS

The study throws some light on the impact of different factors instrumental in determining the nature of building complexes. The optimum nature of building blocks should provide the desirable environments at local level and should serve the requirements at town level. Simultaneously, the study of nature of development should result into the most economical solution keeping in view the cost of land, development cost and construction costs. The study shows inter-impact of physical parameters of densities, land-use, floor area ratio, open spaces. FAR, coverage and economic parameters help in taking a sound decision regarding the nature of the development varying from single storey to high rise building blocks. The theoretical method based on scientific approach helps in coordinating the decisions at different levels so as to achieve an optimum solution in an overall system. Besides the theoretical considerations, many practical factors influence the planning decisions and nature of housing development. Further studies should be conducted so as to regulate nature of building developments for better environments and optimum utilisation.*

*The study forms part of the normal research programme of physical planning at Central Building Research Institute, Roorkee, and is presented with the permission of the Director of the Institute. The author acknowledges the help of Shri B.K. Sharda in the study.

SQUATTING ON PUBLIC LANDS

G.D. KARKARE

All said and done—though said firmly but done by and large falteringly—the phenomenon of squatting over urban lands is uninterruptedly observed throughout all countries of the world with particular accentuation in developing countries. One sincerely doubts as to whether squatters' problem is really soluble or is only to be talked about and discussed in seminars, symposia and conferences or to be presented in the form of nicely written books containing huge statistical data, charts, diagrams and photo pictures. Either the deliberations so far made and various conclusions and recommendations brought out are based on wrong footings, or action to effectively put through, in practice, the recommendations is not being taken, or is not intended to be taken. Latter observations would be seemingly more correct since it would be erroneous to conclude that more than a decade's effort by numerous experts in the disciplines of town and country planning, architecture, engineering, economics, sociology, demography and urban geography, etc., were incorrectly directed. Charles Abraham says, "Politics and group pressures play their part in the less developed world as elsewhere. Candidates wooing popular favour and finding housing a key issue with voters, may announce programmes that are more impressive in the pledge than in the performance."¹ Apparently, there is no reason to disagree with Abraham's above statement, since situation in developing countries, like ours, is not likely to substantially change in the near future.

Efforts to achieve faster economic growth, concentration of newly proposed industries in few selected growth centres which are comparatively advantageous for establishment of industrial complexes, polarisation of population, migration to large urban centres, over urbanisation of already big cities, lack of adequate housing and squatting on lands, both public and private, etc.,

¹Charles Abrahams, *Man's Struggle for Shelter in an Urbanizing World*, MIT Press, 1970, p. 69.

perent inevitable chain of actions and reactions, which will have to be accepted as hard fact to be faced with political determination, logical and practical approach, technical soundness and humanitarian considerations.

By 1970, it was estimated² that on the earth about 100 crores of human heads were living in substandard housing. The urban population increased four times in the four decades 1930-70 and by the year 2000, the urban population is likely to be twenty times what it was in 1920. Selected data on slums and uncontrolled settlements in some developing countries of Africa, South America and Asia and the Far East is available.³

With a view to enabling us to judge the trends of squatters' problem, it would be interesting to pick out from the above data only those details which relate to two or more different years for the same city. Such data are reproduced here in Table 1 for ready reference.

TABLE 1 GROWTH OF SLUM POPULATION IN SELECTED CENTRES OF THE WORLD

Country & city	Year	City population ('000)	Annual population growth rate per cent	Population in slums		
				Total ('000)	Per cent to city population	Annual growth rate per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)
BRAZIL						
Reo de Janeiro	1947	2050	4.34	400	20.0	6.25
	1957	2940		650	22.0	
			3.28			9.62
	1961	3326		900	27.0	
State of Guanabara	1950	2240		159	7.1	
	1960	3300	4.73	337	10.2	11.19
MEXICO						
Mexico City	1952	2372		330	14.0	
			2.76			25.32
	1966	3287		1500	46.0	

continued

²United Nations, "Improvement of Slums & Uncontrolled Settlements", United Nations Publications—Sales No. E.71.IV.6 (p. 21.23).

³*sibid.*, pp. 21-23.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
PERU						
Lima	1957	1261	9.03	114	9.00	53.95
	1961	1716	7.90	360	21.0	22.22
	1969	2800		1000	36.0	
Araquipa	1957	117	3.87	10	9.0	103.91
	1961	135		54	40.0	
VENEZUELA						
Caracas	1961	1330	6.52	280	21.0	32.89
	1964	1590		556	35.0	
PAKISTAN						
Karachi	1964	2280	4.61	752	33.0	5.05
	1968	2700		600	27.0	
TURKEY						
Ankara	1965	979	5.54	460	47.0	12.61
	1970	1250		750	60.0	

Following additional data has been obtained from the respective sources.

INDIA

Pune	1968	717*	92*	12.9	24.62
	1976	992**	4.80	274**	27.6
Bombay	1956-57	3600†		416†	11.6
	1968-69	5400†	4.17	632†	11.7
	1971	5971	4.23	1300†	21.8

*Survey of slums in the urban area of the Pune Metropolitan Region—Pune Metropolitan Regional Planning Board, 1968, p. 3.

**Pune Municipal Corporation.

†Report on the Regional Plan for Bombay Metropolitan Region 1970-71—Bombay Metropolitan Regional Planning Board, March, 1974, pp. xxvi, 28, 62.

‡“Tackling the Slum Problem—A New Deal for Urban Poor”, Directorate General of Information & Public Relations, Government of Maharashtra, July 1976, p. 7.

It is interesting to note from the above data that not only the larger cities in developing countries grew at a faster rate, but the squatting population has also grown at a much faster rate. The simple average of figures in column 4 and 7 in Table 1 indicates that growth rate of slum dwelling population was as much as five times the growth rate of city population.

Insofar as the process of urbanisation in India and Maharashtra is concerned, Table 2 would indicate that barring the census of 1951 which reflects post-partition situation immediately after independence, the decadal growth rate of urban population has generally been significantly more than the decadal growth rate of total population. During 1961-71, decadal growth of urban population was at the rate one and half times the rate for total population.

Table 3 gives growth/fall in percentage by number of, as well as population contained in Class I to Class VI cities of India and Maharashtra during the last four censuses. Concentration of urban population in Class I cities (plus one lakh) and its upward trend hardly need to be overemphasised.

Causes of rapid and uncontrolled urbanisation are the various 'pulls' exerted by large cities and 'pushes' operating in the rural sector. Most powerful are the employment opportunities in cities and non-absorption of increasing working class population in rural activities. Migrants coming to cities are, however, by and large, eventually disillusioned either by not getting suitable employment or when they get some, the earnings are not sufficient to cover up costs of even food and clothing; and consideration of proper shelter has inevitably to be left out. Problem of squatting in general, and on public lands in particular, is therefore primarily of economic nature, then of social character. If break-through could be achieved in these two respects, then only physical considerations could be thought of.

SQUATTING ON PUBLIC LANDS

A clear distinction between squatting on private lands and public lands needs to be made. Squatting on private lands is quite less than what it is on public lands. Moreover, it is the

TABLE 2 DECENTNIAL GROWTH RATE OF TOTAL POPULATION/URBAN POPULATION FOR INDIA
AND MAHARASHTRA (1901-1971)

Year	India			Maharashtra					
	Urban population		Population	Total population		Population	Total population		Growth rate
	Population	Growth rate		Population	Growth rate		Population	Growth rate	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1901	2,58,51,873	—	23,83,96,327	—	32,17,202	—	1,93,91,643	—	—
1911	2,59,41,633	0.03	25,20,93,390	5.75	32,48,989	0.99	2,14,74,523	10.74	
1921	2,80,86,167	8.27	25,13,21,213	0.31	38,57,326	18.72	2,08,49,666	2.91	
1931	3,34,55,989	19.12	27,89,77,238	11.00	44,56,730	15.54	2,39,59,300	14.91	
1941	4,41,53,297	31.97	31,86,60,580	14.22	56,65,111	27.11	2,68,32,558	11.99	
1951	6,24,43,934	41.42	36,10,88,090	13.31	92,01,013	62.41	3,20,02,564	19.27	
1961	7,89,36,603	26.41	43,92,34,771	21.51	1,11,62,561	21.32	3,95,53,718	23.60	
1971	10,87,87,082	37.81	54,73,67,926	24.61	1,57,03,403	40.68	5,03,35,492	27.26	

TABLE 3 PERCENTAGE TO TOTAL NUMBER OF TOWNS AND POPULATION CLASSWISE IN INDIA AND MAHARASHTRA IN CENSUS YEARS 1941 TO 1971

Class of town	Territory	Census years			
		1941	1951	1961	1971
(1)	(2)	(3)	(4)	(5)	(6)
II		2.02	2.42	3.98	4.86
		35.49	41.80	48.40	52.40
	M	1.50	1.31	4.51	5.83
		39.60	45.50	60.50	64.74
II	I	3.58	3.63	5.24	6.78
		11.80	11.10	11.90	12.10
	M	2.63	4.18	5.64	8.65
		7.90	11.80	9.20	11.39
III	I	11.21	12.27	19.14	21.12
		17.70	16.70	18.50	17.40
	M	12.41	10.18	17.67	22.49
		18.00	13.00	13.00	11.40
IV	I	22.79	21.92	30.37	31.88
		16.30	14.00	13.00	12.10
	M	25.94	21.93	33.46	33.92
		17.10	12.80	11.20	8.78
V	I	40.70	38.89	31.38	25.88
		15.40	13.20	7.20	5.20
	M	45.87	51.17	33.08	24.22
		15.30	15.00	5.60	3.39
VI	I	19.70	20.87	9.89	9.48
		3.40	3.20	1.00	0.80
	M	11.65	11.23	5.64	4.84
		1.00	1.80	0.50	0.30
Total	I	100.00	100.00	100.00	100.00
		100.00	100.00	100.00	100.00
	M	100.00	100.00	100.00	100.00
		100.00	100.00	100.00	100.00

NOTE : 'I' denotes India.

'M' denotes Maharashtra.

Upper figure for number of towns.

Lower figure for population.

concern of every individual whose land is squatted upon or he earns rent from the squatters. It is interesting to note that open private lands not designated for any public purpose in the Development Plan/Master Plan of a city are not generally squatted upon; and only the land which is eventually to be acquired by the concerned appropriate authority for the designated purpose, falls victim to the menace of squatting. In case of public lands, invariably all lands, irrespective of whether they are designated for public purpose or otherwise, are squatted upon. This would be evident from the fact that in 1975-76, out of the total estimated squatter population of 14.08 lakhs in Bombay, about 11.4 lakhs persons were squatting on lands vesting in the State Government, The Bombay Municipal Corporation and the Maharashtra Housing Board.⁴ These figures exclude the Central Government lands. This is mainly due to one or more of the following circumstances:

- (a) Inadequate administrative machinery of public authorities in guarding their lands.
- (b) Political interference and lack of political will since almost a third of city population in the metropolises constitutes squatters or uncontrolled settlements.
- (c) Socio-economic conditions of the squatters do not generally permit acquisition/construction of decent shelter with basic infrastructural services such as water, electricity, roads, etc., and proper environmental conditions.
- (d) Absence of required work-place-residence co-relationship.
- (e) Powerful established anti-social elements patronizing smuggling, illicit liquor booths, brothels, pick-pocketers and burglars, etc., are afraid of losing their living.
- (f) Undue dependance of squatters on public exchequer for help in improving their lot, as against self-help and self-reliance.

⁴Government of Maharashtra, "Tackling the Slum Problems—A New Deal for Urban Poor", Directorate General of Information and Public Relations, Government of Maharashtra, July 1976, pp. 12, 17.

Situation at (a) could be dealt with if the public authorities get determined to suitably rehabilitate the squatters in other areas if the lands squatted upon are designated for purposes. Parameters controlling such 'suitable rehabilitation' are dealt with here or else, on the same basis, improvement of the squatters colonies could be effected on the squatted land itself. Political factors mentioned at (b) above are for the ruling Government to deal with and the technical experts or administrators can hardly do anything in that respect, except bringing to the notice of ruling Government the pros and cons of the situation and suggesting suitable measures to correct the situation, if any action in that direction is at all decided to be taken. Political will would be always supreme.

Between social and economic considerations at (c) above, economic considerations are proposed to be discussed at some length. Next to situations (a) and (b), economic aspects of the squatters problem are the crux; and if some concrete and rational steps could be taken in that respect, severity of the problem would be considerably toned down. Once economic considerations are satisfactorily dealt with, it would not be difficult, and in no case impossible, to sort out sociological problems, such as religious and ethnic groups. Ensuring proper co-relationship between work places and residences, particularly of workers from economically weaker sections (EWS), and low income groups (LIG) of the community while framing proposals for use-zoning under a development plan and either making small developed lots available to these groups for construction of shelter as they choose to erect, or making available shelters which could be afforded by them would meet the situation at (d).

Insofar as established anti-social elements, which are likely to obstruct smooth handling of the projects for ameliorating the conditions prevailing in the squatter colonies are concerned, political will, pursuasion, determination and firm action are required.

Last, but not the least, important consideration is the attitude which the squatters are inclined to adopt, or in fact are politically prompted to adopt, as regards financial help from the public exchequer. It is generally true that the economic plight of slum dwellers is by and large pitiable and that some assistance would be required to be extended to them by public

authorities. However, in a developing economy, the public bodies themselves have to frequently, or perhaps always, face financial empasse. Very much desired assistance to squatters can not and should not therefore be necessarily in terms of finance. Sample survey in respect of four representative squatters colonies in Bangkok (1974)⁵ reveals that low income group families direct a considerable amount of their resources, savings as well as labour, towards housing. Assessment of 1,40,000 squatter houses worked out to seven crore US dollars. This would work out somewhere between Rs. 3500 and Rs. 4000 per house. In the process of housing squatters from Fraia do Pinto Favela in Rio-de-Janerio (Brazil),⁶ after 15 years of paying rent at about 10 per cent of the minimum wage, the occupants were expected to get legal title to the dwelling units newly built. The buildings already occupied are maintained and administered by tenants' councils.

In the case of the newly built houses for EWS at Nasik (Maharashtra), the City and Industrial Development Corporation, Bombay could sell on hire-purchase basis over 400 units for Rs. 4300 each, including Rs. 1200 towards land component and cost of providing services. Thus, a family with monthly income of about Rs. 300 can afford to have its own shelter costing around about Rs. 3000. Adding to it the cost of land and development, total investment of Rs. 4500 should not be treated as beyond the reach of economical weaker families. Self-help and self-reliance should be imbibed in the squatters and economics of housing projects should be worked out on the lines suggested below so as to achieve break-through in the otherwise disheartening situation.

It should thus be possible to ensure that the squatters' colonies do not paralyse economic, social and physical life of the city. On the other hand such colonies need not be looked upon as 'cancers' and 'scars' in the city scape.

⁵ "Towards the Recognition of the Peoples Housing Efforts"—The Low Income Housing Delivery System in Bangkok—Discussion papers presented to the Roving Workshop on Low Cost Housing by Shlomo Angel, Stan Benjamin and Koos H. De Goede, Asian Institute of Technology, Bangkok, 1975, p. 24.

⁶ "Rio Favelas" by Frank Bonilla AUFS reports, East Coast South American Series, Vol. VIII, No. 3, 1961.

ECONOMIC VIABILITY OF PROVIDING AFFORDABLE HOUSE

Why do the urban poor stay in slums and do not acquire any decent shelter? Apart from many other reasons discussed earlier, the main reason is very low financial limits up to which they can afford to spend on their shelter. On the other hand there is sufficient evidence to show that self-help, both by cash savings and labour, does help to a great extent in acquiring whatever shelter they enjoy today. Urban land values have already spiralled to unimaginable heights and cost of providing bare minimum services of roads, water supply and sanitation is also by no means insignificant. Unless cost of construction is reduced by resorting to cheaper alternative materials and simple but sound building techniques, it would not be possible to achieve the objective of providing decent shelter to the squatters. Optimum use of scarce urban land resources, and judicious laying of services would also help in that direction.

The question as to what kind of house the squatter can afford, if answered, would provide key to the solution; and we may therefore try to develop a rationale, a workable approach towards that end. Assuming:

A=Plinth area in sq. metres of the house.

C=Cost of construction per sq. metre of the house.

h=Multiple indicating in terms of A, the total plot area in sq. metres required to build area A.

L=Value of developed land per sq. metre.

I=Annual income of the squatter family from all sources.

m=Portion of I which the squatter family can afford to pay towards amortization of capital invested.

X=Portion of total cost which the squatter family will bear by way of amortization, the balance being self-help.

Y=Years purchase for amortization of capital by payment of Re. 1 annually for given number of years and at given rate of interest.

for balancing two sides, viz., cost of the house to be amortized on one side and the capitalized value of net annual instalment which the squatter family can afford to pay,

$$X \times (A \times C + hA \times L) = Y \times 0.7 m \times I$$

where net annual instalment is further assumed to be 70 per cent of the gross paying capacity, the balance 30 per cent being required for out-goings, such as taxes, repairs and maintenance, service charges, etc.

In a city, 'X' may vary from 0.25 to 0.50, 'L' may vary from 20 to 200 and 'I' from 3000 to 5000. For squatters, 'm' would not be much above 0.1. 'Y' will depend upon the terms and conditions on which the housing agency is able to obtain seed capital from financing bodies such as HUDCO. As per the latest scheme of HUDCO for EWS housing, loan at the rate of 7 per cent is available with 20 years period of repaymant. 'Y' may therefore be taken as Y.P. for 20 years @ 7.5 per cent. 'A' cannot in any case be less than 12 sq.m. This leaves only 'C' to be ascertained. For example, with $X=0.7$, $A=12$, $h=2$, $L=50$, $I=3000$, $m=0.1$ and $Y=Y.P.$ for 20 years @ 7.5 per cent, i.e., 10.194, 'C' works out to about Rs. 150 per sq. m. This will indicate the type of construction which could be undertaken to provide decent shelter to the squatters of given 'I' value.

In very hard cases, where $X=0.75$, $A=12$, $C=100$, $h=1$, $L=20$, $Y=10.194$ (as above) and $m=0.10$, 'I' works out to about Rs. 1500 p.a. Thus, all those urban poor, whose annual income is below Rs. 1500 cannot afford to have even the smallest shelter, unless the central and state Governments or local authorities subsidise their housing either through cross subsidies under comprehensive area development projects or by shelling out finances from the public coffers.

All other aspects, such as political will, work-place-residence-relationship, etc., if satisfactorily looked into, the affordability aspect taken up on the above lines would, it is hoped, provide the required rationale for solving the problems of squatting in general and on public lands in particulars.

SUGGESTED ACTIONS

With a view to tackling the squatters' problem in a realistic and effective way, it would therefore be necessary to take following steps:

- (i) At national and state levels, future economic inputs in general and industrial inputs in particular, should be

so made as to arrest over-urbanisation of our large cities and to channelise future urbanisation in a preconceived and preplanned manner.

- (ii) Political will, determination and humanitarian but firm actions are prerequisites for making any headway in ameliorating the squatters' plight.
- (iii) Lands vesting in public authorities, and private lands designated for public purposes under statutory development plans/master plans must be got released from squatters' grip so as to safeguard larger interest of all city dwellers.
- (iv) Rehabilitation of squatters, where absolutely necessary, should be so proposed that work-place-residence-relationship is maintained.
- (v) Housing for squatters should be done on the basis of 'economic viability including affordability' and not in an 'arithmetic way' and the squatters should be made to contribute towards the cost in the form of self-help, both by savings and labour. Subsidy should be brought in only where annual income of squatter families is less than Rs. 1500 per household.
- (vi) For keeping the component of land cost minimum, surplus vacant land available as a result of proceedings under the Urban Land Act, 1976 should, as far as possible, be brought under squatters' rehabilitation programme.

RELOCATION OF SQUATTERS IN DELHI: QUEST FOR A POLICY

GANGADHAR JHA

Squatter settlements have become a common feature of urban landscape especially in the large towns and metropolitan cities. For the teeming rural millions living below the poverty line, major urban centres present a view of an oasis where they can have respite from hunger, disease and ignorance. The poorest of the poor, therefore, get attracted to the urban area in search of bread and subsistence. Delhi, in particular, has come to be associated with squatters not because they were recently bulldozed and 'relocated' but because of the sheer magnitude of the problem of squatters as also its phenomenal growth in the city. They have posed serious challenge for the urban plan administrators who, in a zeal to clear the sites of the 'ugly structures' and to 'beautify' the city, have adopted their own ingenious schemes from time to time. Recently, during the national emergency about 5 lakh squatter population was relocated in 27 relocation colonies after the controversial demolition operations.

The paper seeks to search for a coherent policy, if any, for the relocation and rehabilitation of squatters in Delhi. This quest for a policy proceeds by looking at the relevant proposals of the Master Plan documents, official policy pronouncements as also recommendations of various committees and expert groups from time to time. The implementation of relocation schemes is then briefly reviewed for comprehending the extent to which implementation was geared to the policy pronouncements. Subsequently, it also examines the possible policy options for a proper framework of solution to this growing problem. However, this is preceded by an advocacy of positive aspects of squatters as an element of city life and its economy.

The squatters are generally looked upon with contempt, as something undesirable and to be avoided from the cityscape. The squatter settlements are regarded as "plague spots in any urban setting . . . areas of insanitation, crime and vice, which are both a disgrace and a source of danger to the city as a whole."¹ Such observations lose its force when viewed in another context. Squatters are in fact a positive element of city's life and economy. They provide the city with workers in various sectors of the city's economy, they help in 'servicing' the city, add to the productivity of the city and, above all, the immigration of prospective squatters promotes enterprise, drive, and enthusiasm among the economically weaker sections and leads to a process of modernization and social advancement. The squatters get an opportunity of self advancement from the below-subsistence to subsistence and to still higher aspirations. And this they achieve without any institutional assistance. This is why they are regarded "a formidable content of creative energy, leadership and organisation, an unequivocal desire to rise above the past. . . ."²

Coming from rural areas, the squatters bring with them rural traits, habits, values and ways of living. Being confronted with new urban setting and a new environment, these transitio-nals are required to adjust their attitude and behaviour according to the new setting at a short notice. They undergo this process of modernisation smoothly which is communicated further to their kith and kin. This to a great extent adds to the pace of economic and political development.³

The problem of slums and squatter settlements has to be seen in the backdrop of urbanisation. In the developing countries the emergence of such settlements are essentially related to the process of urbanization and urban growth so much so that

¹Delhi Development Authority (DDA), *Work Studies Relating to the Preparation of the Master Plan for Delhi*, Vol. I (no date), p. 223.

²T. K. Majumdar, "The Problem of Squatter Settlements : A Sociological Perspective", *Social Scientists Association*, T. & C.P.O., New Delhi, April, 1974.

³Aprodicio Laquian A., *Slums are for People*, The Barrio Magsaysay Pilot Project in Philippines Urban Community Development, East-West Centre Press, Honolulu, 1971, p. 6.

it has started to be acknowledged as a stage in the process of urbanisation. A concomitant feature of urban growth especially in the major urban conglomerations is that migration from rural areas inflates the city size but the planning and administration system of the cities becomes incapable of absorbing the ever increasing population. The reasons of migration from rural areas are well known. As the rural areas are still characterised by abject poverty, the migrants have to choose between only two alternatives—home without job in their native home to jobs without proper home in cities.⁴ They chose the latter and flock to the urban areas which provide them jobs to earn livelihood. The phenomenon of squatters is, therefore, said to be an index of "socio-economic dislocation arising from the nature of growth process in the developing countries."⁵

Having migrated to the urban areas, the economically weaker sections accept whatever accommodation is available or can be created quickly on open spaces which are unsuitable or are lying unused. Thus, they create their own housing and meet the need for a shelter without much add and any institutional help. They create altogether a new informal settlement. Perhaps this is why Dwyer calles it 'spontaneous settlements'.⁶

The problem of spontaneous settlements is not unique to Delhi and other metropolitan cities of India. It is universal throughout the Third World countires. Manila's one-third of the metropolitan area population consists of squatters and slum dwellers. In 1961, about 25 per cent of Djakarta's population was made up of squatters and slum dwellers. In 1967 one lakh people in Kuala Lumpur lived in slums and squatter settlements. Singapore had about 26 per cent of its population as slum dwellers and squatters.⁷ In India, it is estimated that as much as 5 million people out of a total population of 19 million of Delhi, Bombay, Madras and Calcutta live in squatter settlements. About 15 to 20 per cent of the population of cities

⁴Bose, Ashish, "Why People Migrate to Cities," *Yojna* (Republic Day Annual Number), January 16, 1965, p. 25.

⁵Laquian, A.A., *op. cit.*, p. 5.

⁶Dwyer, D. J., *People and Housing in the Third World Countries : Perspectives on the Problem of Spontaneous Settlements*, Longman, London, New York, 1975, p. 3.

⁷Laquian, A. A., *op. cit.*, p. 4.

with a population of 3 lakhs and more is estimated to be living in such settlements.⁸

In Delhi, according to a comprehensive survey conducted by the T.C.P.O. in 1973, there were 141,755 squatter families residing in 1373 jhuggi jhonpri clusters of different sizes.⁹ Of this, 123,536 or 87 per cent were located in urban Delhi. In 1951 Delhi had only about 12,749 jhuggies. The increase between 1951 and 1973 was thus more than ten times. The squatter settlements were found to be growing at an annual rate of 12 per cent which is more than twice the growth of population of most of the cities. The population of households living in squatter's settlements is, therefore, found to be increasing ever since 1951. In 1951 those living in jhuggies formed only 3.89 per cent of the total urban households. This increased to 8.30 per cent in 1961 and to 14.66 per cent and 16.62 per cent in 1971 and 1973 respectively.¹⁰

It is worth noting that more than two-third of Delhi's urban population is residing in sub-standard condition.¹¹ About 13.2 lakh people reside in area legally notified as slums; 5.2 lakh people are living in unauthorised colonies; 2.5 lakh persons are residing in villages engulfed by the extension of urban limits and known as urban villages. Before the relocation operations during the national emergency, about 1.5 lakh families or about 6 lakh persons were residing in the jhuggis and jhonpries most of whom have been resettled in 27 relocation colonies which are no better than original clusters in matters of amenities and services. To this must be added about 2.5 lakh persons who were earlier resettled in 16 J.J. colonies. Thus about 29.4 lakh population of urban Delhi is residing as second grade citizen.

Before relocation the squatters were living as very close-knit social groups in the various J.J. clusters along with their kins, caste and cultural groups. This was why the anonymity of city life was never a problem for them. They helped each other during

⁸Town and Country Planning Organisation, *Jhuggi Jhonpary Settlements in Delhi : A Sociological Study of Low Income Migrant Communities*, Part II, April, 1975, p. 1.

⁹*Ibid.*, Part I, October, 1973, p. 11.

¹⁰*Ibid.* p. 20.

¹¹Shrivastava, P.P., "A New Deal for the Slum Dwellers", *Journal of Institute of Town Planners, India*, September, 1974, No. 18, pp. 11-23.

distress and surmounted any calamity as a group. The rate of unemployment was generally found to be almost zero in the J.J. clusters. Mostly these people had created *jhuggis* near the place of work so that they did not have any problem of transport.

SQUATTERS AND THE DELHI MASTER PLAN

Recently, during the emergency, the squatters' clusters were demolished and were relocated in 27 newly developed colonies on the peripheries of urban Delhi. The relocation operations during the emergency became rather controversial and was one of the main issues in the last national elections for the Lok Sabha (1977). The official thinking during those days was that it was not demolition but 'rehabilitation' in better urban milieu. It was also latent in the thinking that squatters, being the encroachers on public land, did not have any legitimate claim for permanent stay on the sites occupied by them. Relocation of squatters on the peripheries beyond the urban limits of 1981 was justified by citing similar precedence. In order to identify a coherent policy, if any, for the resettlement of squatters in Delhi let us look at how the schemes of relocations have been conceived and implemented from time to time.

At the time of formulation of the Delhi Master Plan, there were about 50,000 families living in squatter settlements (the Plan called it 'bustis'). Altogether 13 sites had been selected by the Municipal Corporation of Delhi (MCD) for resettling the squatters. These sites were carefully selected keeping in view the distance factor. The squatters were, therefore, generally relocated at the nearby sites. The site in the north of Rajpur village, for example, was to accommodate the squatters from the nearby Subzi Mundi zone and the site near Naraina village was to receive squatters from Patel Nagar and Karolbagh.¹² When the Master Plan was being prepared, a number of resettlement schemes were already on the anvil. The Master Plan, therefore, did not further elaborate the sites to be utilised for relocation purposes in future. The Plan also did not visualise the anticipated rate of increase of squatters in Delhi

¹²DDA, *Work Studies, op. cit.*, p. 217.

at various points of time. This was perhaps the major lacuna of the plan that it did not visualise the magnitude of economically weaker sections of the society finding its way to Delhi.

However, the plan suggested a general policy frame to be kept in view while planning for relocation of squatters. The plan documents suggested a broad framework for the solution of the problem of squatters by linking it with the restructuring of urban environment in a way that would equalise living conditions and community facilities between different areas and socio-economic groups including the squatters.¹³

The Interim General plan for Delhi had suggested to rehouse the slum dwellers as near as possible to their existing work centres or to create new work centres near the proposed rehousing areas. In any scheme of rehousing, it suggested to take utmost care in maintaining the existing community and social patterns of the people.¹⁴ The Work Studies of the Delhi Master Plan adopted a pragmatic approach when it observed that "due to economic backwardness a total clearance of the slum dwellers and bustis is not feasible in the near future—at least for the next two decades".¹⁵ It, therefore, suggested to step up the construction of low cost housing at least to prevent the formation of new slums. 1,10,000 dwelling units were suggested to be constructed for them (50,000 for squatters and 60,000 for slum dwellers). It was also suggested to develop the resettlement colonies forming part of larger neighbourhoods having an inter mixture of lower middle and middle income groups.

It was also suggested to earmark 'reasonable areas' in several zones for the low income groups migrating to Delhi. "These areas should not be on the periphery of the city but should be well distributed so that they are not too far away from the work places".¹⁶ It again repeated that the resettlement schemes should not be segregated in any way.

The Draft Master Plan even suggested to issue directives to all the colonisers and also the government departments engaged in building activity to reserve 25 per cent of the new housing for

¹³DDA, *Work Studies*, see Preamble.

¹⁴Town & Country Planning Organisation, *Interim General Plan for Greater Delhi*, 1956, pp. 52-53.

¹⁵DDA, *Work Studies*, *op. cit.*, p. 198.

¹⁶*Ibid*, p. 217.

the rehabilitation of slum dwellers displaced as a result of clearance operations.¹⁷ A recommendation of major importance in the Plan document was to relax the building bye-laws permitting not only sub-standard development but also enabling construction of low cost cheap houses¹⁸ which was recognised as the "craving need of the day". The cost of construction of the proposed massive low cost housing was proposed to be subsidised in a most ingenuous way. The subsidy was to depend on the proportion of "sweat equity" provided by the proposed document.¹⁹

It is evident that the plan did not spell out the schemes in detail. It also did not put specific proposals for the anticipated growth of squatters in Delhi. Nevertheless, it did provide direction to solve the problems of squatter settlements. The authors of the Delhi Plan appreciated the existence of squatters, their low economic capacity and their urge of seeking kinship ties. It was this appreciation which led them to suggest not to disturb their community life and ideal work and home relationship which happens to be the core objective of the whole plan document.

THE RELOCATION OF SQUATTERS

Having discussed the guidelines as laid down in the plan, let us now turn to the implementation of the relocation schemes.

The relocation of the Jhuggi Jhonpri dwellers known as the J.J. Removal schemes was initiated in 1960 on the basis of recommendations of a Committee constituted by the Ministry of Home Affairs, Government of India. Initially the scheme envisaged to allot 80 sq. yds. developed plots having a latrine, a water tap and a platform to each squatter family on a lease of 99 years. The cost of the land was subsidised up to 50 per cent for those with a monthly income of Rs. 250. The cost was envisaged to be paid in instalments in ten years. The number of squatter families was then estimated to be 50,000 and the entire

¹⁷DDA, *Draft Master Plan for Delhi*, Vol. I, p. 112.

¹⁸DDA, *Work Studies*, *op. cit.*, p. 218.

¹⁹By contributing 25 per cent of the labour himself the sweat equity of the proposed occupant will amount to 15 per cent of the total value of the project as labour represents approximately 60 per cent of the total cost of the project.

scheme was to be implemented within two years at an estimated expenditure of Rs. 4.33 crores. A special census was also conducted in 1960 and the squatters were issued a census slip which entitled them to be an 'eligible' squatter having a claim for the allotment of a plot of 80 sq. yds.

Implicit in this policy was that those who squat on public land subsequently will be dispersed and will not be allotted any alternative site. However, it was later on found that the allotment of a plot of land on ownership basis encouraged benami sales. Moreover, majority of the squatters were unable to pay the instalment of the cost of land. The scheme was, therefore, revised in 1962 and it was decided to dispense with the element of ownership. Of the 50,000 squatting families, about 5,000 squatter families were estimated to afford the rent for the tenements. Another 20,000 were estimated to afford the rent of the developed plots and hence they were to get developed plots. The rent was again subsidised up to 50 per cent for those with an income of Rs. 250 per month. The remaining 25,000 squatter families were to get only 25 sq. yds. plots because of their relatively weak economic capacity. They were to pay a subsidised rent of Rs. 3.50 per month plus Re. 1 as conservancy charges. Pending construction of tenements, all the eligible squatter families were initially to be relocated on developed camping sites. The 'ineligibles' were, however, to be evicted and dispersed.

But things did not proceed well. Eligibles and ineligibles got mixed up and it became a problem to distinguish them at the time of clearance. Hence the scheme was again revised in 1964. Now all the squatters were to be given a plot of 25 sq. yds. only. The ineligibles (post 1960 squatters) were to be penalised by resettling them in far off localities and at full rent.

By 1967, only about 16,000 squatter families could be resettled. The Ministry of Works and Housing appointed a Study Group in 1967 to review the scheme and suggest afresh the measures to tackle the problem. According to the Study Group, there were about 66,000 families who squatted after 1960. On the recommendation of the Study Group, the government stopped the construction of tenements and also the allotment of 80 sq. yards plot even to the eligible squatters. The study group did not favour to allot any plot of land to the ineligibles

as it was thought to encourage squatting on public land. However, in view of "human considerations involved", it was recommended to remove them on the peripheries of urban Delhi. The government accordingly decided in 1970 to remove the post 1960 squatters on the peripheries and the level of services and amenities was scaled down for them. They were also required to pay full unsubsidised rent of Rs. 8 per month plus Re. 1 as service charge.

Between 1960 and April 1975 (i. e. before the national emergency) about 53,317 squatter families were relocated in 16 J.J. Colonies. Of this, 3667 were allotted 80 sq. yds. plots, 3,560 were given two room tenements and the remaining 46,900 were accommodated on 25 sq. yds. plot each. This involved an expenditure of Rs. 13 crores. Of the 16 J.J. Colonies developed during this period, three colonies (Tigiri, Hastal and Nangloi) were developed by the MCD during 1966-68 outside the Master Plan urban limit of 1981.²⁰

Relocation during Emergency

Demolition of J.J. clusters continued and got accelerated especially during emergency. Before this, demolition of J.J. clusters and its relocation was undertaken rather cautiously on a limited scale and the official thinking seemed to have settled round the idea of improving the environment of the clusters. In view of huge expenditure involved in clearance and relocation of about 1.5 lakh squatter families it was thought to improve their living conditions. The scheme of Environmental Improvement was, therefore, started in the Fourth Five Year Plan in 1972-73. Financial assistance was provided for supply of water, community bath and sanitary latrines, sewers, drainage, street lighting and improvement of open spaces. The scheme was introduced in the slums and J.J. clusters which were not intended to be cleared in the next ten years. In Delhi the scheme was adopted as part of the Minimum Needs Programme of the Fifth Plan.

The demolition operation in Delhi, thus, started even when the

²⁰DDA, *Resettlement Colonies—Review of the Problems* (Mimograph-ed), June 1977, p. 9.

Environmental Improvement Programme was well in operation.²¹ And this was done to place the squatter families in immense hardships not because of their undergoing the family planning operation was a precondition for alternative allotment of 25 sq. yds. plots but because the squatters settled in west were sent to east; those in the north to South and vice versa. This completely disrupted the work-home relation of the economically weaker sections of society. Now, of course, they have been permitted to interchange the plot. The pace of demolition during emergency can be judged from the table given below :

Demolition By Various Agencies

Period	Structures demolished by				Total
	DDA	MCD	NDMC		
<i>Pre-Emergency Period</i>					
1973	50	320	5		375
1974	680	354	25		1059
1975 (Till June)	190	149	27		366
TOTAL	920	823	57		1800
<i>During Emergency</i>					
1975	35767	4689	796		41252
1976	94652	4013	408		99073
1977 (Till 23-3-77)	7545	96	—		7641
TOTAL	137964	8798	1204		147966

SOURCE : Shah Commission, "Case History of Demolition", *The Hindustan Times*, December 14, 1977.

²¹Commitment to this Programme can be judged by citing an instance of a J.J. cluster located in Chanakya Puri. The NDMC had prepared the programme for environmental improvement and had budgetary allocation for this. Even when asked by the DDA that the cluster is to be removed and money should not be spent on this, the improvement programme continued unabated.

As many as 27 new resettlement colonies were developed by the DDA covering an area of 968.07 hectares having a total number of 148,262 plots. Of these, five colonies, namely, Gokalpuri, Khichripur, Sultanpuri, Kalyanpuri and Trilokpuri having an area of 335.58 hectares were developed outside the urban limit of 1981 whose designated land use is green and marshy land. The land use of these areas is yet to be changed to residential.²² Land was forcefully occupied for the development of a few colonies (Mangolpuri, Sultanpuri) without notifying the land for acquisition. Even now the land for colonies developed outside the urban fringe is yet to be formally acquired. It is interesting to note that the land use of three colonies (Tigri, Hastal and Nangloi) developed by the MCD during 1966-68 has not been changed as yet.

It is reported that the DDA spent about Rs. 13 crores on the relocation scheme. It is not known whether this includes or excludes the amount spent on demolition and transportation of the squatter families and their belongings to the new sites. In order to meet expenditure on the scheme, the general practice was to spend much in excess of the planned outlay and to get it enhanced and adjusted later on. The original outlay for the year 1975-76 was provided as Rs. 100 lakhs. This was modified to Rs. 250 lakhs. The actual expenditure was, however, Rs. 321.08 lakhs. Likewise, the plan outlay of Rs. 200 lakhs for 1976-77 was modified to Rs. 710 lakhs but the actual expenditure incurred was Rs. 919.36 lakhs. Thus though the Planning Commission approved an outlay of Rs. 1397 lakhs for the J. J. Removal Scheme in the Fifth Plan, as much as Rs. 1331.42 lakhs was already spent during the first three years of the Plan by the DDA.

In spite of this huge expenditure the level of services and amenities in the relocation colonies is deplorable. According to DDA's own estimate, an additional amount of about Rs. 56 crores is required to remove deficiencies and provide adequate services and facilities.²³

²² The 'green belt' around the 1981 urban limit was proposed by the Master Plan for Delhi to 'contain the urban sprawl' and it was to be 'inviolable'.

²³ *Ibid.*, pp. 18-19.

QUEST FOR A POLICY

It is evident from the policy pronouncements in the Master Plan documents and the relocation of squatters from time to time that there does not exist any coherent and definite policy for the squatters in Delhi. The schemes so far implemented are characterised by an attitude of ambivalence. The policy has been shifting back and forth from time to time. Though the Delhi Plan did not visualise the magnitude of this problem and did not suggest specific programme for the rehabilitation of squatters, it nevertheless gave some useful guidelines and the working out of details were perhaps left for the concerned action agencies. But these seem to have been obliterated in actual implementation.

A review of the Master Plan by the Town and Country Planning Organisation in 1973 had suggested to give a new orientation to the low cost housing programme which could take care of squatters. As recently as 1975, a Working Group of the Union Ministry of Works and Housing reporting on the mid term appraisal of the Delhi Master Plan and its implementation observed that the removal of "J.J. clusters from all areas is neither possible nor desirable under the prevailing constraints."²⁴ It, therefore, suggested to improve the community life in the existing clusters itself. It again reiterated the Master Plan suggestion for developing 'composite colonies' by reserving 12 to 15 per cent of total land for the housing of Economically Weaker Sections (EWS) of the society. But these could not have any dent on policy decisions.

The ambivalence of the official attitude can be brought into sharp focus by citing only two examples. In 1971 the then President of the NDMC decided to demolish some newly constructed jhuggis in Chanakyapuri. For this the permission of the then L.G. as also of the Union Minister of Works and Housing had been duly obtained. But when the demolition actually started, it had to stop mid-way at the instance of the then Prime Minister. Again in February, 1973, the MCD started removing the squatters from the berms of Kingsway Camp Road

²⁴First Report of the Working Group on Mid-Term Appraisal of the Delhi Master Plan and its Implementation (Mimeographed), Ministry of Works and Housing, Government of India, p. 22.

to a nearby site near T.B. Hospital. The operation had to stop as no less a person than the P.M. rushed to the site and intervened. A general direction was then issued that henceforth there would not be any demolition in Delhi without prior approval of the P.M.

But all the previous thinking of the experts, planners and expert groups gave way to the decision of the 'higher-authorities'²⁵ and a large scale demolition started in Delhi. In fact ever since the introduction of the J.J. Removal Scheme in 1960, there is not found to have been any definite policy in this regard. The scheme started with much fanfare having excessive standard of 80 sq. yds. plots and built up tenements to be allotted to the squatter families.²⁶ The idea of allotting tenements was then dropped and instead of permanent solution a recourse was taken only to temporary relocation of eligibles at the camping sites where the squatters were not permitted to put up any permanent structures. Subsequently, the distinction between eligibles and ineligibles was also done away with and only a plot of 25 sq. yds. was given to both. Of course, the ineligibles were put to more hardships as a penalty for squatting.

It is evident that no coherent policy existed even during the normal times. The aberration from the policies of the Delhi Plan started right in 1967. But even then a lip service was given to the 'humanitarian' aspect in dislodging the weakests of the lowest income group by removing them to the peripheries. It is worth noting that the Government of India accepted the recommendation of the study group regarding the shifting of ineligibles on the urban fringe only in 1970. But the MCD developed three colonies on the peripheries during 1966-68. It would be relevant to quote from a study conducted by sociological experts appointed by the Government of India before the emergency :

To conclude a synoptic review of the Jhuggi-Jhonpri Removal Scheme, it can be stated that it was purely based on physical-cum-engineering approach of 'bulldozing' the

²⁵ DDA, *Resettlement Colonies*, *op. cit.*, p. 6.

²⁶ Recently DDA decided to allot 80 sq. yds. developed plots to individuals whose annual income is less than Rs. 12,000 and there was a scramble for it.

existing bustis . . . and transplanting them in relocated colonies and communities. This was found to be of limited utility not only in preventing future growth of such settlements but was also rejected by a large proportion of the population for which it was intended.²⁷

A major lacuna with the J.J. Removal scheme in Delhi has been its narrow scope of clearing and relocating the squatters. Consequently, the implementation has simply been changing the location of squatters. It has not made any effort to provide new massive low cost housing which could integrate the squatters as part of neighbourhoods. The existence of squatters in metropolitan cities as also their immigration cannot be ignored. This has now become an 'urban imperative'. Exodus of the economically weaker sections to Delhi cannot be stopped in any way. Earlier in 1967, the study group wanted to make squatting a cognisable crime by either amending the Public Premises (Eviction of Unauthorised Occupants) Act, 1958 or by enacting a new legislation. It had also sounded the feasibility of amending Section 441 of the I.P.C. for imposing penalties on squatters. But none of these alternatives was found to be feasible by the Union Ministry of Law.

The squatters are, therefore, going to continue as a part of metropolitan life. This requires to shake off the existing ad-hocism. In all the 16 J.J. colonies developed before the emergency and 27 colonies developed during emergency the squatters are not permitted to put up permanent structures as these are even now 'camping sites'.

Any permanent solution to the problem of squatters has to be initiated in the wider region of Delhi—which sends the squatters to Delhi. Unfortunately even after more than a decade and a half of planned growth under the Master Plan the development of Ring Towns as also the National Capital Region has not made any headway. Recent thinking on this indicates a sliding back from the earlier framework for development of the region. A long-term solution to the problem

²⁷Quoted from the Report presented to Convention on Problems of Housing and Employment (in the context of the Delhi Master Plan,) Delhi State Council, C.P.I., May 1976, p. 8.

of squatters in Delhi, therefore, is to provide enough jobs through development of the Ring Towns. The D.D.A. now proposes to earmark sites for the squatters in the Ring Towns. This is yet another example of unrealistic policy. As the Ring Towns have not acquired sound and diversified economic base the squatters, if shifted, will not be able to get any job.

A coherent policy for the squatters in Delhi should give due importance to the programme of massive low cost housing. Here also, unfortunately, the housing programme as also the scheme of large scale acquisition, development and disposal of land has taken an elitist view ignoring the needs of the low income and EWS.

Planning must be reoriented to the changing socio-economic composition of the society. What is important is provision of new housing, not demolition. In this context it is worth mentioning that of the total number of 1101 J.J. Clusters in urban areas before the emergency, 29 per cent of the clusters were located on lands designated as residential. A good many of them were situated on hillocks and undulated lands. These clusters could well have been improved on the existing sites.

As noted earlier, the policy for squatters should give a reorientation to the low cost housing. This can be made possible by allocating a proportion of land for low cost housing. Recently the DDA introduced allotment of 36 sq. meter plots by draw of lots at a price of Rs. 2,000 each. This became quite popular. The scheme should be tried in all the residential colonies to be developed in future by making terms attractive and providing the necessary funds for construction so that it can be afforded even by the squatters.

To sum up, the ambivalent attitude towards the squatters and existing ad-hoc policy must give way to sound coherent policy. Such a policy should recognise the existence and positive role of squatters in city's economy. The problem has to be attacked essentially at the regional level. It should also give new look to the policy of housing, land development and disposal. In view of growing magnitude of this problem the feasibility of creating transitional way stations for the necessary training and vocational guidance of the rural migrants as tried in the Philippines can also be examined. The existing Master Plan for Delhi is going to complete its span in 1981 and work on preparation of

a second Plan is already afoot. The new Plan should give serious thought to this problem and should provide concrete proposals to be adopted in future. Any exercise for developing a coherent policy for the solution of problem of squatting, to quote Laquian, should "hasten the transition of both the squatters and slum dwellers as persons and the slum and squatter areas as communities from their present disruptive state to a more developmental level".

SLUM AND SQUATTER SETTLEMENT—A CASE STUDY OF KANPUR

V. JAGANNADHAM AND C.M. PALVIA

In India, a plan scheme on slum clearance and improvement was launched during the Second Five Year Plan by enacting an Act entitled: Slum Clearance and Improvement Act, 1956. The Scheme provided for acquisition of slums and re-housing of families whose income per month did not exceed Rs. 350 and for construction of night shelters and improvement of environmental conditions. Finance was given by the Central Government in the form of 'block grants and block loans' to State/Union Territories. No well-designed study has however been carried out on slum conditions, as also in regard to analysing of the progress in implementing the Slum Clearance and Improvement Scheme, initiated in the second plan (1956-1961).

There are, according to 1971 census, eight 'million (+)' population cities in India, of which the first four bigger cities (namely, Bombay, Calcutta, Delhi and Madras) have compiled a fairly good amount of data on slums. However, the next four bigger cities (namely, Ahmedabad, Bangalore, Hyderabad, and Kanpur) have not attempted well-designed studies on growth of slums and squatter settlements. In order to fill the gap the National Buildings Organisation of Ministry of Works, Housing and Urban Development requested the Indian Institute of Public Administration, to undertake a study in Kanpur. The findings of the study of Kanpur slums and squatter colonies are discussed here.

KANPUR SCENARIO

As a member of a family of Class I towns (that is, towns 'with population of 100,000 and over'), Kanpur was one amongst 85 towns, in 1951; one amongst 113 towns in 1961; and one in 147 towns in 1971. The Kanpur's population in the slums and squatter settlements formed 20 per cent of the aggregate city population, in 1951; 25 per cent in 1961; and 30 per cent

in 1971. At the time of the survey in 1976, city's population was estimated to be over 33.3 per cent; and by 1981, it would easily be over 36-37 per cent. In general, residential units of low-quality did not restrict themselves to any particular area of the city; they were extensive and all-pervading and in particular had fertile location in central business district, near and around rich villas, banks of Ganges, side-line of Grand Trunk road, railway tracks, narrow lanes and nallahs, etc. Overcrowding and congestion, extremely poor environment conditions and poverty amongst the dwellers, in these areas have created worse slum conditions.¹

In Bombay, nearly 90 per cent of the slums are on the 'public' land and in contrast, same percentage on the 'private' land in Poona which resembles the situation in Kanpur. Largely the occupiers of slum and squatters are migrants. Generally, the new-migrants and younger ones find shelter in the squatter settlements. Most of the inhabitants of these colonies, try to insulate themselves against new 'aura' of city-life and do attempt to live the rural life-styles. An impression is generally caused on observers of the slum and squatter dwellers that they are 'contented' and what they miss are water-connections and sanitary facilities.

Kanpur holds 'primacy' in the North. As a biggest city for more than 50 years (barring entry of Delhi as a bigger city after Independence), it has seen the industrial advance along with its popularity as a slum city of the North, having supremacy in masculine population,² overcrowding³ and house building activity⁴ falling much behind the increase in population. In 1945, Kanpur Improvement Board noted that there was shortage of 92,000 houses of 2-room accommodation.

In 1951, the average number of persons per room was 2.6 in urban areas of Kanpur district as against 1.7 per room in rural areas. In slum areas of Kanpur, in one-room houses, the average number of persons was 3.9. The net supply of new housing between 1920-50, turned out, on an average per year, to be only 1.2

¹ESIC Regional office noted that 65.2 per cent of industrial labour live in houses not fit for human habitation.

²With 762/1000 female/male ratio.

³81,825 people in 33,385 rooms (or 4 persons per room).

⁴Rate of building units supply was 1.2 per annum per 1000 population.

building units per 1,000 of population.

The main habitations of slum and squatter population in Kanpur, have been 'Ahatas' which now number about 800, as compared to '183 or less', in early 1930's. The size of the 'Ahatas' ranged from a minimum of 1-9 housing units to about 5,000: the former group holding 5-50 persons, and the latter about 25,000-30,000 persons. The big-sized Ahatas of slum settlements were; Darshnepura, Raipurva, Chawanganj and those 'Ahatas' holding over 2000-5000 persons numbering about 25-30. The total slum and squatter population in Kanpur, grew from 123,755 in 1951 to 560,000 in 1976, an increase of 4.5 times during 25 years. The net growth was 3.5 times, showing an annual average growth of about 18 per cent, as against population growth of Kanpur city by about 75 per cent or at about annual average of 2.5 per cent (see Table 1).

TABLE 1 GROWTH OF CITY POPULATION SLUM AND SQUATTER POPULATION IN KANPUR CITY AND OVERCROWDING OF THE HOUSEHOLDS FROM 1921-1976

Year	City population (million)	Slum population	Average house- hold size
(1)	(2)	(3)	(4)
1921	0.22		
1951	0.81	123,755 (1948-51)	4.5
1961	0.971	242,750	5.0
1971	1.268	380,400	5.5
1973-74	1.384	440,000	n.a.
1975	1.442	500,000	n.a.
1976	1.500	560,000	6.0

The Ahata survey conducted by Kanpur Development Authority revealed that 82 per cent of the slum and squatter population lived in 'Ahatas' of upto 200 population; and the rest of the slum and squatter dwellers lived in bigger-sized 'Ahatas'. Again, the information emanating from survey of the IIPA on 'slum and squatter households', has been used to study the various socio-economic variables including 'in' and surrounding conditions of housing settlements. The inter-mix of the information and data emerging through the above two surveys is presented in the Table 2.

TABLE 2 DISTRIBUTION OF POPULATION SIZES IN SLUM AND SQUATTER AHATAS OF KANPUR CITY (IN JULY-AUGUST 1976)

Sl. No.	Households in size- groups of 'Ahatas'	Sample households in type of Ahatas holding		
		Slum households	Squatter households	Total households
(1)	(2)	(3)	(4)	(5)
1.	Up to 50	(76.90) 313 (39.00)	(23.10) 94 (47.00)	(100.00) 407 (40.70)
2.	51—100	(88.60) 155 (19.40)	(11.40) 20 (10.00)	(100.00) 175 (17.50)
3.	101—200	(84.00) 115 (14.40)	(16.00) 22 (11.00)	(100.00) 137 (13.70)
4.	201—500	(70.60) 84 (10.50)	(29.40) 35 (17.50)	(100.00) 119 (11.90)
5.	501—1000	(75.40) 46 (5.80)	(24.60) 15 (7.50)	(100.00) 61 (6.10)
6.	1001 and over	(86.10) 87 (10.90)	(13.90) 14 (7.00)	(100.00) 101 (10.00)
7.	Total	(80.00)	(20.00)	(100.00)
		800 (100.00)	200 (100.00)	1,000

NOTES : The sample size was 1000 out of about 100,000 households forming one per cent of the population distributed into 800 slum households and 200 squatter households in proportion to population/household distribution between slum and squatter colonies.

From Table 2, it is obvious that 70 per cent of the slum and squatters households were below 200 household size Ahatas, and rest of the higher household size Ahatas contained 30 per cent showing that a small number of big-sized Ahatas inhabit a larger proportion of households/populations. The bigger-sized Ahatas have higher degree of social, cultural and economic homogeneity as compared to smaller-sized Ahatas. In view of this factor, larger sample was taken from smaller Ahatas and vice versa to embrace a wide spectrum of different characteristics of slum and squatter dwellers in regard to education, migration, culture, social and economic characteristics.

MIGRATION COMPOSITION TRENDS IN KANPUR

It is interesting that origins of the immigrants in Kanpur city were : (1) Kanpur District; (2) Neighbouring and/or other districts of U.P. (3) other States and other countries. A portrayal of the origins of migration-inflows in Kanpur city for the periods (1) Pre-1940 to 1955 and a sample of the 1976 survey is presented in Table 3. From this it follows, that from the period of 'Pre 1940-1955' the proportion of total migrants from 'Kanpur district itself' increased from 11.92 per cent to 50.20 per cent in 1976; proportion for the 'neighbouring and other districts of U.P.' came down to 46.40 per cent in 1976 from 75.40 per cent in 'Pre-1940 to 1955' period; and so also, the share of the migrants from 'other States and abroad' declined to 3.30, in 1976, vis-a-vis 12.68 per cent in 'Pre-1940 to 1955' period. It would also be observed that while migration to the city from within Kanpur district was about 12 per cent as compared to 88 per cent from outside, it was almost equal by 1976.

But the aforesaid also uncovers the fact that almost all the migrants found their shelter in the slum and squatters colonies; and the slums and squatters areas were also the major places of abode of the district.

While legal house building activity was *low at about 1-1.2 dwellings per 1,000 population* in Kanpur city, house building activity in the slum and squatter areas, was that of about 65,830 new blighted illegal dwellings with average household size of 6 persons in 1976. This shows a mean new supply of about

TABLE 3 CHANGING TRENDS IN MIGRATION ORIGINS FROM PRE-1940 TO 1955 TO 1970's UP TO 1976 IN KANPUR CITY

	From Kanpur district	From neighboor- ing and other districts	From other States and abroad	Total
(1)	(2)	(3)	(4)	(5)
A. Pre-1940-55	11.92	75.40	12.68	(100.00)
B. 1976 Survey	50.20	46.50	3.30	(100.00)
(i) Slum dwellers	50.60	46.30	3.10	80.00 (100.00)
(ii) Squatter dwellers	48.50	47.50	4.00	20.00 (100.00)

SOURCE : 1. D. N. Mazumdar, *Social Contours of an Industrial City—Social Survey of Kanpur City*, Asia Publishing House, Bombay, 1960.

2. V. Jagannadham and C. M. Palvia, "Slum and Squatter Settlement in an Indian Million (+) City-Politics, Programmes and Perspective", (1977).

2,635 dwelling units per annum for the period 1951-76. Applying this to medium slums+squatter population level of say 3,42,000 persons, the supply comes to about 8 dwelling units per 1000 of slum and squatter population.

The substantial number of dwellings are made with junk, rags, grass leaves, mud, etc., with no ethos of dimensions of length, breadth, and height of the rooms (even sometimes less than 3'-4') door, window (or no window at all), no proper size of space rules and the building activity. No latrines exist worth the name. Drains are largely the streams of all unhygienic mix. Also no worthwhile medical facilities are provided. Paved lanes are non-existent; and no potable water supply is available. It is a horrible insult to humans, when such dwelling may not be fit for living even for animals. Actually, a sizable dwelling unit (95%) will not be able to satisfy any of the 'Basic' or supplementary indicators of Housing Levels of Living, thrashed out by the United Nations.

Thus, it is important to control the urban building activity in the urban areas in regard to affluent as well as very low-income

strata of the community. While the former display their money-power in making cosy and palatial residence, on bigger chunks of land with low density in the city areas where land is very costly, the latter have no means either for land, or for useful building materials or skilled labour-input. They neither command the attention and sympathy of the local governments. In this demonstration of psychology of the rich or neo-rich and 'despondent and broken spirits' of the poor, it becomes the 'prime duty' of the State to devise and formulate controls which would maximise the utility function of national resources for urban building activity.

To arrest further the deterioration in the urban housing conditions, the important policy thrusts shall have to be of 'preventive' as well as 'curative' types and should be thought out in terms of the short, intermediate and long-term action-oriented programmes. *Short-term action* can be demolition of slums; but it has been found to shift the slums elsewhere, imposing more hardships on the dwellers. Intermediate term action could be redevelopment consisting of: (i) re-building of the roofs and or walls or a cluster of houses; (ii) improvement of environmental and community services. Long-term action calls for: (i) integrated urban metropolitan, regional and area programmes in tune with social and economic development plans with high employment generating focus; (ii) institutional participation of public sector and private voluntary and cooperative organisations in regard to flow of credit, vocational and technical assistance, growth-centres in urban and neighbouring rural development centres. In addition, as tools and instruments of local development coordinated strategies of: (i) simple and meaningful bye-laws; (ii) socially-oriented fiscal and financial instruments; (iii) flow of domestic and international finance are the 'must'. As estimated by the National Committee of Environment Planning and Coordination (NCEPC), slums and squatter population in Indian cities ranges from 25-30 per cent. In Delhi, it was estimated in 1973 that 20 per cent of 4 million population lives in about 1300 'clusters of slum'. It increased at the rate of 12 per cent per annum during 1951-1973 as against a rate of only 3.4 per cent per annum in the capital city's population. The story, of other metropolitan cities, is not different. In view of the population growth projections, the demand for construction

infrastructure will be stupendous, involving additional financial, physical and labour 'inputs' more than twice of the 1971 level infrastructure.

Coming specifically to the case of Kanpur City, the number of dwellings backlog as in 1976, for the slum and squatter settlements was 0.56 million. The meeting of this demand can be phased at the rate of about 0.11 million per year, in each plan for the five quinquennial plans : 1976-81, 1982-86, 1987-1991, 1992-1996 and 1997-2001. During this period the additional efforts on account of new needs will be 0.028 million, 0.035 million, 0.042, million, 0.048 million and 0.056 million respectively making a total annual effort of 0.05, 0.57, 0.064, 0.07 and 0.078 million units as shown in Table 5.

The financial capital budget of Kanpur on account of land prices and development, dwellings construction (involving materials and labour cost), will total to Rs. 11,594 million for the period 1977-2001; Rs. 1800 million, during 1977-81; Rs. 2052 million, during 1982-86 and Rs. 2808 million, during 1997-2001. Further about 10 per cent of capital cost will be spent on account of the maintenance cost on the cumulative capital stock in each plan-period. In the total cost of Rs.11,594 million, the land and development cost will be Rs.1914 million; materials cost, 2585 million. This effort will generate an additional annual employment of 0.033 million in the first plan, which will successively rise to 0.049 million in the last (that is, fifth) plan. However, the integrated Plan of Development of Kanpur and City's Perspective Plan (1967-1991) prepared by the Kanpur Development Authority aim at development effort which is one-fifth of the effort required.

The financial funds, required to finance the cost of solving the slums and squatters problem in Kanpur, will be mobilised (during 1977-2001) to the extent of about Rs. 11,955 (or Rs. 12,000) million from different resources: (1) Own savings of the slum and squatter households: Rs. 795 million; (2) self-help labour contribution Rs. 350 million; (3) Government plan sector (of the Centre, State and Kanpur Urban Government), Rs. 6,000 million; (4) Institutional flows such as from LIC, PF, ESIS, commercial and corporative banks and a revolving fund, Rs. 2280 million and (5) from foreign resources, such as

TABLE 4 PROJECTED URBAN POPULATION IN INDIA—DISTRIBUTED QUINQUENNIALLY IN KANPUR, MILLION (+) CITIES, '100,000 (+)' CITIES AND THE RESIDUE URBAN POPULATION (FROM 1971-2001)—ALONG WITH ESTIMATES OF SLUM AND SQUATTER POPULATION AND THEIR PROPORTIONS

Year	(in millions)					
	Million(+) cities Kanpur	Other seven cities	Total (2)+(3)	100,000(+) cities	Other residue towns	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1971	1.2 (5.00)	24.11	25.38 (44.50)	57.02 (52.04)	51.77 (47.96)	108.79 (100.00)
SL+SQ						
35%	0.42	7.40	7.82			
1976	1.5 (5.20)	20.20	30.70 (44.20)	69.39 (54.00)	59.10 (46.00)	128.49 (100.00)
SL+SQ						
37.3%	0.56		11.45			
1981	1.75 (5.00)	35.30	37.05 (43.20)	85.55 (56.00)	67.22 (44.00)	157.77 (100.00)
SL+SQ						
40%	0.70	14.12	14.82			
1985	2.05 (4.60)	42.70	44.75 (41.80)	106.80 (58.00)	75.60 (42.00)	184.40 (100.00)
SL+SQ						
42.5%	0.87	18.15	19.02			
1991	2.40 (4.60)	51.24	53.64 (40.80)	131.54 (60.00)	88.68 (40.00)	219.24 (100.00)
SL+SQ						
45%	1.08	22.96	24.04			
1996	2.77 (4.50)	61.50	64.27 (39.10)	164.26 (62.00)	100.68 (38.00)	264.94 (100.00)
SL+SQ						
47.5%		29.21	30.53			
2001	3.20 (4.50)	73.70	76.90 (37.50)	205.26 (64.00)	116.41 (36.00)	321.67 (100.00)
SL+SQ						
50%	1.60	36.85	38.45			

TABLE 5 QUINQUENNIAL PHYSICAL PLANS FOR THE ELIMINATION AND IMPROVEMENT OF SLUM AND SQUATTER SETTLEMENT IN KANPUR (1977-2001)

Sl. No. of quin- quennial	Periodic situation	Slum & squatter settlements affected households	Cumulative total of col. 3	Annual plans for elimination/improvement over five year periods (slum and squatter programmes for households)				
				1981		1986		1991
				(I)	(II)	(III)	(IV)	B.L.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Backlog in 1976	0.56	0.56	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
I.	Addition in five years (between 1977-81)	0.14	0.70	0.028	—	—	—	—
II.	New Addition in five years (between 1981-86)	0.17	0.87	—	0.035	—	—	—
III.	New Addition in five years (between 1987-91)	0.21	1.08	—	—	0.042	—	—
IV.	New Addition in five years (between 1992-96)	0.24	1.32	—	—	—	0.048	—
V.	New Addition in five years (between 1997-2001)	0.28	1.60	—	—	—	—	0.056
A. Annual Programmes				0.050	0.057	0.064	0.070	0.078
B. Five Year Programmes				(0.25)	(0.285)	(0.32)	0.35	(0.39)

from IBRD/LDA, UNDP, FAO, WHO, US-AID and other foreign governments' International Development Corporations, Rs. 2030 million. (For details see Kanpur Report and also see Table 6).

In conclusion, it may be pointed out that unless, the above-mentioned extent of investment required to solve the slum and squatter problem is forthcoming slums and squatting on public lands will be difficult to prevent.

TABLE 6 ESTIMATED MOBILISATION OF THE FLOW OF DOMESTIC AND EXTERNAL RESOURCES OF FINANCE FOR MEETING THE COSTS OF 25 YEARS PROGRAMME (1977-2001)—PHASED THROUGH SEQUINQUENNIAL PLANS FOR SLUM AND SQUATTER HOUSEHOLDS IN KANPUR CITY

(Rs. in millions)							
	Plans Resources	First Plan (1977-81)	Second Plan (1982-1986)	Third Plan (1987-91)	Fourth Plan (1992-96)	Fifth Plan (1997-2001)	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. (i) Own Resources of all the slum and squatter households @ 5 per cent*		125 (0.25 houses in Mn.)	140 (0.28 houses in Mn.)	160 (0.32 houses in Mn.)	175 (0.35 houses in Mn.)	195	795
(ii) Self-help		50	60	70	80	90	350
2. Government Plan Sector (Centre State, Urban †)	1000	1100	1200	1300	1400	1400	6000
3. Institutional (LIC, PF,IESI) Postal Life Insurance Com. Banks, Coop. Banks etc. † Employer & Employee Participation	50	75	100	125	150	150	500

4.	Revolving Fund (Rs. 100 millions) to start in (176-177) § (This includes land and Housing Disposal funds) ‡	300	480	550	600	650	2280 (Potential)
5.	Foreign Resources I.B.R.D. (and its affiliates) UNDP, FAO, WHO, USAID, International Cooperative Alliance Government to Government grants and aids.	315	350	400	455	510	2030
		Total	1,840	2,205	2,480	2,605	2,905 11,955 (or 12,000)

Does not include servicing)

* It is assumed that each household will contribute on an average minimum own resources (*i.e.*, down-payment in lump or through instalments) of Rs. 500 (or 5 per cent of the cost of land minimum house).

† Through plan, budgetary and non-plan funds' allocations.

‡ Already Rs. 20 million have been taken into account in Table 5.2 (page 52 in ICDP for 1976-81)—and added by other institutions amenable for long-term and intermediate-term loans (from Com. banks).

§ It is provided that Kanpur Development Authority will start with a fund of Rs. 100 millions under Slum Improvement and Development Programme. There is an illustrious example of DDA in raising the size of Rs. 50 million 'Revolving Fund' to develop the size of the Fund to about 25 times in 15 years.

DEVELOPMENT CONTROLS AND IMPLEMENTATION MACHINERY

H. U. BIJLANI

Many of the administrative problems that we face today emanate from organisational issues. It is a matter of small wonder, therefore, that most of the management literature relates to such issues. This is because organisations today face challenges due to rapidity of change in their environment. Unless they are quick enough to respond to these changes, they will continue to be sluggish and lethargic. Further, unless changes in organisation are made by a well thought out design, changes, will occur by default.¹

The classical approach² to a typical procedure-oriented machinery emphasises only the efficiency of its structure. It argues that the problems can be solved by restructuring the work allocations or by authority distribution. In contrast to this classical approach, the management literature of today lays emphasis on behavioural factors. In nutshell, it says that effectiveness of any organisation depends on what people make of it. In this paper, I shall analyse the machinery for implementing development controls both from the classical and behavioural approach.

But before I do so I would like to visualise the size and scale of urban growth and the challenge that it poses to the implementation machinery entrusted with the job of enforcing these development controls.

THE URBAN CHALLENGE—2001³

The National Census of India 1901 placed India's urban

¹Maheshwari, B.L., "Organisation Design Trends and Issues", *ASCI Journal of Management*, Administrative Staff College of India, Hyderabad, p. 66.

²O'Shaughnessy, J., *Business Organisation*, London, George Allen and Unwin, 1966.

³T. & C.P.O., *Towards A Human Settlement Policy in India—2001*, Town and Country Planning Organisation, New Delhi, September, 1975.

population at 2.53 crores and put it at about 11 per cent of total population. Since then, the percentage of urban population has increased to 10.09 crores in 1971, *i.e.*, 20 per cent of total Indian population. The trend of urban population growth has been as follows:

Year	Total Urban Population (million)	Percentage to Total Population
1901	25.35	10.85
1911	25.90	10.29
1921	28.09	11.18
1931	33.46	12.00
1941	44.15	13.86
1951	62.44	17.30
1961	78.93	17.98
1971	109.09	19.97

Futurologists make us believe that this trend will grow unabated. The projections are that by 2001, urban population will rise to 29 per cent of total population in India and the number of urban settlements will increase from 3121 in 1971 to 5301 in 2001. A comparative picture of rural urban population growth pattern during 1971-2001 is expected to be as follows:⁴

Year	Population (in million)		
	Total	Urban	Rural
1971	548	109	439
1981	668	150	518
1991	801	205	596
2001	945	278	667

SOURCE : Registrar General of Census of India, The Population of India, 1974—World Population Year—CICRED Series.

If this scale of urban growth takes place then the area put to non-agricultural uses will increase from 15.6 million hectares in 1967-68 to 22 million hectares in 2001. The details are as follows:

Pattern of Land Utilisation During 1967-68 and 2001 AD⁵

(in million hectares)

	1967-68	2001 (Projected)
Culturable land	195	186
Area not available for cultivation:	48	52
— of which for non-agricultural uses	15.6	22
— Barren	32.5	30
Others	36.9	38
TOTAL	328	328

Further, the maximum impact of urban growth will be felt in the big metropolitan areas. Along with national urban population explosion, we shall witness urban population implosion within some metropolitan areas. Cities with population of a million and above will grow in numbers from 9 in 1971 to 17 in 2001. Similarly, Class I cities with population of a lakh and above but less than 10 lakh will go up from 141 in 1971 to 400 in 2001.

DEVELOPMENT CONTROL AND URBAN PERSPECTIVE

The question with which urban planners will have to grapple with, will be how to make this massive urban growth orderly so that city environment does not decline in quality. But this will depend on whether the local governments are viable enough to guide urban growth and are able to use effectively

the development controls at their disposal. Number of development controls for this purpose are at the disposal of local agencies or governments. Under each of the following classifications the detailed measures are taken to control urban development:⁶

Local Public Regulatory Instruments

Major Types

- Zoning Regulations
- Sub-division Regulations
- Building Codes

Supplementary Types

- Fire Code
- Industrial Safety Codes
- Site Design Regulations
- Urban Renewal Plans
- Health and Sanitation Codes
- Flood Control Ordinance
- Air Pollution (being enacted)
- Water Pollution, etc.

Local Public Guide Instruments

- Master Plan
- Urban Design Plan
- Historical and Architectural Preservation Programmes, etc.

Of all this plethora of controls three regulations are of overriding importance and which determine the quality of urban environment that we will have. These are:

- Zoning Regulations
- Sub division Regulations
- Building Byelaw.

⁶*Building the American City : Report of the National Commission on Urban Problems to the Congress and to the President of the United States, 1968.*

Zoning Regulations

Decades of efforts have gone into the development of zoning regulations in their present form. A zoning regulation prescribes how each parcel of land in a community may be put to use. Following important subjects invariably are included in a zonal plan. These are as follows:⁷

Important Elements and Subjects Regulated by Zoning Regulations

Important Element in Zoning

Use

Regulated Subjects

Residential, business and industry. Over a period of time, the zoning regulations have been butteressed by various other uses under each of the above broad categories.

Population

Housing regulations lay down permitted densities, *i.e.*, families per acre, etc.

Density

Building height, lot area to be coverd by building, floor area ratio, useable open space, etc.

Building Bulk

For each district or zone in the city detailed maps are prepared. Within each broad category sub details of residential, business and industrial uses are given.

Zoning Maps

Implementing machinery: Adherence to various regulations can be ensured only by having an efficient implementing machinery. Once detailed zoning plans are drawn, their implementation is left to special authorities, or in their absence, to local governments. Zonal plans by definition are self-executing. Any official can implement a zonal plan since he has just to refer to a particular zonal plan and either reject or approve the activity. There are always provisions for change in the zonal plans and because of that, the implementing machinery is always under pressure to make

⁷*Building the American City, op. cit.*

changes which suit the vocal, vested or influential sections of society. Complaints from operative builders or developers may arise regarding misinterpretation of zoning regulations or the public authorities may on compassionate grounds allow some variations in uses and even make special exceptions.

Sub-division Controls

Once control of larger tract development are taken care of by zonal regulations, supplementary rules like sub-division regulations come into play to ensure that the standards of development while sub-dividing large tracts are adhered to.

Sub-division regulations further ensure that sub-division is as per the master plan. Local services like sewer lines, drainage facilities, water lines are in consonance with those already in existence or planned to be created. Further, it is also ensured that the sub-division is effective and consistent within itself, *i.e.*, width of roads, streets, minimum size of plots, etc. Standards of land development are laid down and any sub-standard sub-division is penalised. The sub-division regulations also ensure that development costs to be incurred by the local government or local agency are recovered when sub-division takes place.

Implementing machinery: Administration of sub-division regulations is more complicated and cumbersome and hence requires elaborate administrative machinery to see that each sub-division is as per various statutory requirements. Where development authorities exist, the sub-division plans are to be approved by them, but where these are not created the regulatory powers are vested in the municipal governments.

Building Codes

Building codes are defined as series of standards and specifications designed to establish minimum safeguards in the erection and construction of buildings to protect the human beings, who live and work in them, from fire and other hazards and to establish regulations to further protect the health and safety of the public.⁸ There are two types of codes, *i.e.*, the National Building Code and the Local Building Byelaws. The National

⁸*Building the American City, op. cit.*

Building Code represents the national awareness and goa's and is only a recommendatory document for adoption in the local building byelaws. The basic characteristic of local building byelaws is that they are to be adhered to mechanically and no discretion is allowed. These regulations are used as police power. The total number of building codes in the country could be as high as the number of local governments.

PROBLEMS CONNECTED WITH IMPLEMENTATION OF DEVELOPMENT CONTROLS

The problems of implementing development controls are multidimensional. National and regional forces which impinge on city growth cannot be dealt with at local level. In the light of this, the strategy open to local governments is to do what they can within the given resources or urban limits. Basically then, the impediments to implementation of development controls emanate from:

- (a) impediments which are inherent in the development controls; and
- (b) impediments which emerge from the implementing machinery.

Impediments which are Inherent in the Controls

Preponderance of compartmental approach : Though we have plethora of development controls, we still pursue each of them as if it has no inter-relationship with other regulations. The following will give an idea about the inter-relationship of discipline, elements regulated and the agencies involved.⁹

Each agency vigorously implements its regulations disregarding its impact on the total situation. Even at formulation stage, the inter-relationship is ignored. Each principal participant or expert draws particular regulations and then these are left for execution by different agencies in their own way. Even if formulation of each set of codes or regulations is treated as a specialist's job, enforcement of these regulations which

⁹*Douglas Commission Report, U. S. Government, Printing Office, Washington, 1968.*

Inter-relationship of Standards among Building Codes, Zoning and Sub-Division Regulations¹⁰

	<i>Building Codes</i>	<i>Zoning</i>	<i>Sub-division Regu- lations</i>
	<i>Building</i>	<i>Housing</i>	<i>Regulations</i>
Principal participants in developing standards and codes	Engineers, Architects	Health Specialists	Planners, Engineers
Subject of objective:			
Natural Light	Windows, yard light walls habitable room size, building separation	Windows and habitable room size	Building height, etc.
Access and Egress	Access to sheets, corridors stairs, etc.	Corridors doors, exists, etc.	Required access to streets
Occupancy	Room (dimensions (minimum area per person, etc.)	Room dimension etc, (minimum area per person	Minimum area per dwelling unit, etc.
Air Pollution (discharge system into air)	Vents and venting	Vents and Venting systems, etc.	Land-use Location
Fire safety	Construction and Materials, etc.	Maintenance requirement for internal exist ways	Building separations Access

Agencies involved: Local Agencies like Municipal Bodies Development Authorities, Improvement Trusts, etc.

¹⁰Building the American City. op, cit.

is a legal job, need not be left with the same specialist. Engineers or Architects continue to formulate and enforce the building codes. In the absence of proper training in 'enforcement constraints', the specialists in enforcing regulations create more problems than they solve for themselves, for the organisation and for the community. Each building agency, each developer refers to multiplicity of codes, and deals with multiplicity of authorities and in the process the level of housing activity suffers. Inconsistencies in theory and implementation of codes become the order of the day.

Technical viability of the codes : Number of expert committees have gone into details and the conclusions that have emerged focus on the fact that the standards (apart from affordability criterion) are even technically prodigal and in a poor country like ours, they need to be made more realistic. For example, the fire safety standards, room size requirements, floor space indices, population densities laid down, etc., are all too prodigal and too expensive.

Inter-city and intra-city variations in regulations : Variety of byelaws are in operation in different cities. Even within the same city depending upon the number of local governments, variety of codes create administrative conflicts. Lack of uniformity in standards is a big problem. Practitioners in the field of housing find area-wise variations in standards as a great hinderance in their operations.

Rigidity of standards : Number of experts have referred to the deterrent role of rigid and fossilised development standards in housing design innovations. The National Building Code which represents the national aspirations of low cost housing has yet to be accepted in local building byelaws. Similarly, the standards applied to the planning of sites and to the inter-relationship of placement of building site tend to be particularly inflexible. The typical lot-by-lot regulations of zoning ordinances have been widely and properly criticised on this basis. The experts agree that a zonal plan should provide for mixed uses.

Impediments which Emerge from the Implementing Machinery
Ineffectiveness of the local governments to deal with the

problems : While the forces which create, reinforce and accelerate urban growth are predominantly regional or national in character, the solutions to the problems are being-found at local level. At local level, limited resources and administrative effectiveness make enforcement of development controls inadequate and ineffective. Even within the same metropolitan area the multiplicity of authorities adopt conflicting postures to achieve common goals.

Local government diffusion and its smallness pose a series of problems in the face of mounting urban pressures. These problems are :

- (a) most local governments are too small to provide effective solutions to urban explosion and implosion;
- (b) extensive overlapping layers of government cause further confusion;
- (c) popular control over local government is ineffective;
- (d) policy leadership is typically weak, if not non-existent;
- (e) archaic administrative organisations are totally inadequate for the enforcement demands; and
- (f) the professional services of highly qualified personnel are typically not attached to local government.

Local political factors and ineffectiveness of development controls : Frequent changes in the development controls are made to suit the interests of some groups. In spite of statutory regulations, large tracts of land are sub-divided in a sub-standard manner and extensive public and private lands are squatted upon in connivance with the local influential pressure groups.

Poverty and enforcement constraints of development controls : The abyss of poverty in India is so deep that not only majority of the people cannot construct as per codes but they cannot also even afford to pay the penalties. As a result large scale slum settlements come up. Not long ago, one out of ten people in Delhi lived in houses which were partially or wholly unauthorised. The situation becomes worse as the years roll-by. Most of the public authorities at many places adopt demolition as a solution and have found that their enforcement programme has run into jeopardy. Public agencies

during the last one decade may have demolished more houses than they have constructed.

Practices and procedures for enforcement : Enforcement of development controls is in the hands of particular specialists who lack experience in administrative work of what is purely a legal exercise. Frequently, the cases are taken to the courts by the affected parties and years elapse before even partial enforcement is adhered to. Even more serious than the legal hurdles are the practical problems encountered in enforcing regulations. The land-use regulations decide about the use of land into industrial, commercial or residential, "too much too soon". The property owners find the official land use arbitrary and unrelated to realities and develop the land or encourage sales they may like and thus defeat the very tenets of the official plan. Secondly, zoning regulation enforcement authorities though make the zonal plan but have little control on the desired type and timing of development. There are innumerable instances where, in the absence of such controls, the zoning regulations have been continuously revised in India and many third world countries.

Lack of proper state or central government support to local enforcement : Since enforcement of development controls is basically a police function, it is seen that local governments do not get adequate support from higher levels of government.

Fiscal approach to land-use regulations : Most local authorities or governments play the game of 'fiscal zoning', *i.e.*, permitting changes in the land-uses to allow high taxation potential activities like high income group apartments, commercial, industrial, etc., at the cost of low wise high density low income settlements. This fiscal approach has put the under-privileged sections of society in most disadvantageous position. Where shanty towns of unauthorised settlements have come up, these are cleared or bulldozed to pave the way for high tax activities. Local development agency of today has a commercial yielding and legalistic rather than humanitarian view of city problems.

Lack of agencies for resolving local conflicts : Master Plans, by the time are completed, get dissociated from realities. Areas shown as green are pulsating with human settlements

and in the absence of resources, political and administrative will and sustained effort, master plans never get revised and become a source of local conflict in the city. In the absence of any institutions which reconcile these conflicts at local level, the stalemate continues.

Discretionary powers of the enforcement agencies are inequitious in practice : Provision of discretionary powers in various enforcement codes create seeds of inequity right at formulation stage. Discretion is often used with abandon for the benefit of vested interests.

THE WAY OUT

A cursory look at the problems being faced by the enforcement agencies is enough to convince any one that drastic changes are required in:

- (a) revising the strategy of development controls; and
- (b) strengthening the enforcement agencies and change their practices and procedures.

I personally feel that if we take following steps the seriousness of the problems can be mitigated to a large extent:

By giving poorman's orientation to the codes : By making various standards affordable, we can make them enforceable. Decent standard approach has not worked and will not work till at least tolerable living standards are achieved.

Development controls though can be formulated but cannot be enforced at local level : More of regional approach is needed to solve the local problems. Many local agencies have found to their dismay that land-use has completely changed on the periphery just because the other local authority has permitted industrial-use, etc. Land-use gets determined at regional level, leaving enforcement to the local level. In the process, the regional authorities rarely get subjected to the pressures and continue to remain in blissful ignorance. It is, therefore, essential that their responsibility is shared by all concerned authorities.

Improving the effectiveness of enforcement agencies : Some of the above listed constraints of enforcement agencies can be

easily overcome if we strengthen the enforcement agencies.

Periodic review of all that is formulated and what is enforced : Cities change and since regulations adversely or favourably affect the people and their possessions, it is desirable that a periodic review of all regulations is attempted. Static plans trying to deal with a dynamic situation have little chances of success.

MACHINERY FOR DEVELOPMENT CONTROL

DEVA RAJ

Performance of any task requires appropriate organisational capabilities, *i.e.*, an administrative machinery equipped with necessary tools and an effective manpower. What is the administrative organisation our local areas have and where does it fail to regulate development activity? What are the tools and instruments of control—the rules and byelaws, the norms and standards, land-use plans of redevelopment and expansion as well as concept of architectural design and urban form? And last but not the least, what are the skills and techniques of the field and supervisory staff and the procedures and lines of accountability? All these questions are very relevant in examining the viability of organisational machinery for development control.

DIMENSIONS OF DEVELOPMENT ACTIVITY

The term 'development' has been defined in clause (d) of section 2 of the Delhi Development Act, 1957 as follows:

(d) development, with its grammatical variations means the carrying out of building, engineering, mining or other operations in, on, over or under land or the making of any material change in any building or land and includes redevelopment.

The connotation of term as practised by municipal authorities or as envisaged in the various municipal Acts in India, is not as comprehensive and clear. The dominant perception of municipal tasks in this regard has been confined to 'erection', 're-erection' or 'alterations' in buildings. This was natural to the nineteenth century concept of municipal function with stable and fixed jurisdictions, free from the pressures of growth and expansion. But urban growth has been far too rapid particularly

since World War II. To the 33 million people living in town and cities of India in 1931, about 100 million people have since been added leading to escalating densities and mounting congestion through one or more of the following processes:

- (i) shrinking of floor area per capita;
- (ii) shooting up of Floor Area Ratios—from 1 to 3 or 4 if not higher;
- (iii) rapid changes in land-uses with commercial and industrial activities invading residential lanes, streets and localities;
- (iv) chaotic building lines marked by projections and encroachments without an architectural form;
- (v) sub-division of existing sites and open spaces, large and small often violating all norms of planning;
- (vi) proliferation of growth of unauthorised colonies in the outlying, extended or peripheral areas.

FAILURE OF ENFORCEMENT

These were new dimensions of development activity for which the traditional municipal organisation was unprepared—legally, technically and administratively—in most of our towns and cities. The Task Force on Planning and Development of Small and Medium Towns and Cities¹ ascribes the failure of municipal authorities to regulate and control development to the following factors:

- (a) the defect in laws and limitation of powers;
- (b) failure to frame byelaws or to revise them to meet current needs;
- (c) limitations of jurisdiction;
- (d) inappropriate procedures and enforcement machinery; and
- (e) the problems of personnel and technical competence and awareness.

Even if the above limitations were overcome, there are factors such as the sheer pressures of growth as also social and political forces that have come in the way of enforcement of

¹*Report of the Task Force on Planning and Development of Small and Medium Towns*. Ministry of Works & Housing, Government of India, p. 76.

rules and byelaws. For instance, Delhi with its high level administrative machinery and technical expertise could not prevent large scale unplanned growth of unauthorised colonies.

LEGAL TOOLS

The legal powers to control and regulate development must, therefore, include not only building regulation but also land-use, land sub-division and development and architectural and environmental control, as well as effective powers to remove encroachments from public roads, lands and open spaces. They must also cover all territorial areas—rural or urban—that are subject to developmental activity. The sources of these powers are:

- (i) The enactments of the state legislatures and in some cases of the Parliament,
- (ii) Rules and regulations encoded by the state governments, and
- (iii) Byelaws prepared by the local bodies with the approval and sanction of the state governments.

In all cases powers have to be exercised by the local authorities, special authorities or agencies that may be specially vested with such powers under the law.

The most important enactments are the municipal Acts for urban areas and the panchayati raj legislations for rural local bodies. These laws, however, do not provide for regulation and control of all aspects of development as spelt out above. The rural local bodies generally do not have the necessary orientation and perspectives; nor the panchayati raj legislations make adequate provisions even for regulating activity. Therefore, the rural/peripheral areas lying in the twilight zone of the influence of urbanisation attract surreptitious dealings in land speculation and chaotic ribbon development along the roads (and even railway lines) approaching the urban centres.

Local government legislation has, therefore, been supplemented in many states by Town Planning Acts or by such special legislation as Improvement Trust Laws, Housing and Development Acts, Land-use Control or Regulation of Building Operation Acts.

The Bombay Town Planning Act, 1915, the Madras Town Planning Act, 1920, the Travancore Act of 1932 and the more recent revised Bombay and Maharashtra Acts of 1954 and 1966 as well as the Karnataka and Assam Town Planning Acts sought to vest additional powers in the rural and urban local bodies for preparation and enforcement of plans and schemes of development. The Calcutta Improvement Trust Act, 1911, the U.P. Town Improvement Act, 1919 and similar enactments for Punjab, Delhi, Nagpur, Howrah, Bangalore, etc., the Bihar Town Planning and Improvement Trust Act of 1951 have set up special authorities for town expansion and development.

The legislation for development control in the seventies is marked by two distinct trends:

- (a) specific legislations for setting up development authorities charged with planning and development (both enforcement and execution) on the pattern of Delhi Development Act, 1957; and
- (b) the town planning legislations which are moving from a purely planning legislation to comprehensive enactment for planning as well as executive agencies on an areawise basis.

The Tamil Nadu Town and Country Planning Act, 1971, while incorporating all the features of comprehensive planning law provides for setting up special, local and regional planning authorities. In fact, even the Madras Metropolitan Development Authority has been set up within the framework of the Act by inserting Section 9A in the Act for the purpose. The Madhya Pradesh Act makes similar provisions, and the Town and Country Planning Organisation of the Government of India has redrafted the Model Town Planning Law to ensure implementation and enforcement mechanism.

RULES AND BYELAWS

The state governments have rule-making powers under the various enactments and sometimes they do formulate rules for building control to be followed by all urban local authorities as has been done in the case of Kerala and Tamil Nadu. But in

most states, the formulation of byelaws is left to the municipal councils, who may notify the proposals for public comments and then submit the same for sanction and notification by the state governments.

But often the small and even medium towns and cities "do not have the necessary competence to draw up their own byelaws, as is generally required under the municipal laws. A number of states have adopted the practice of formulating draft model byelaws and left them to be adopted by the municipal authorities. Many of them adopt the byelaws with some variations while others use the model for reference. The desirability of local formulation of byelaws stems from the fact that it gives the citizens the opportunity to raise objections, considering local conditions and help to make the municipality and the people aware of the provisions. Generally, however, little interest is taken and the building bye-laws continue to be most extensively violated and are a constant source of confrontation between the citizen and administration."²

The Task Force on Small and Medium Towns and Cities recommended that the state governments should make rules for building regulation and control which "should automatically come into force but the local authorities should be asked to publicise them and make them available for local sale. They should also be encouraged to come up with proposals for local variations and the rules may provide that the state government may allow changes to suit local conditions; it is also possible to provide for some relaxations in respect of small towns."²

A landmark in the practice and standardisation of building construction has been the formulation by the Indian Standards Institution of a National Building Code, 1970, which has been receiving the attention of state governments and a number of states such as Gujarat, Kerala and Uttar Pradesh have re-drafted their building byelaws for adoption and enforcement by local authorities.

The most serious problem, however, is the wide gap between formulation of comprehensive and technically perfect bye-laws and their actual enforcement which must recognise a number of

²*Report of the Task Force on Planning and Development of Small and Medium Towns, op. cit., p. 76.*

limitations. It is not unusual that the essentials of the code are submerged and scarcely perceived by local officials and much less by the citizens, having disastrous consequences on enforcement.

Another limitation of building codes which has the effect on their extensive violation, has been the assumption of rigid standard and norms for all building activity ignoring on the one hand the problems of different levels of human settlements and the varying requirements of different areas and localities in the same city. For instance, it has been observed that "the old central parts of the town or city require special consideration. Often it is found that the sites are too small, often less than the minimum prescribed in the bye-laws, so that proposals for re-building cannot be entertained at all. Nor is it possible to apply uniformly the norms in respect of open spaces and set-backs."

Problems also emerge when unrealistic standards are sought to be applied to all classes and types of constructions without considering the use of local materials and technologies and the socio-economic conditions of different sections of society particularly the weaker groups. The Kerala Rules, for instance, make separate provision for 'huts'. Although building byelaws usually provide for a minimum plot size of 80 sq. yards, a realistic review of this standard made it possible to resettle about 2 lakh of families in Delhi on plots of 25 sq. yards only.

While there have been some building byelaws in force, there has been a general absence of byelaws for regulating building lines, sub-division of sites and land-uses and zoning. These aspects of development control require more technical manpower than is generally available with municipal authorities. The Task Force Report observed:

Building Control in respect of individual building is important but far more damage is done to the city environment by this unregulated and clandestine use of land through sub-division and indiscriminate increase in densities. This has been taking place in spite of the fact that every municipal Act makes provision requiring every person intending to make or layout a street, to divide land whether built or partly built into building sites and to sell or lease out such lands, to submit plans and obtain necessary sanction of the municipal authority. Such sanctions are often not obtained. Even when

such plans are submitted and sanctions obtained there are two serious omissions:

- (a) There are no sub-division bye-laws laying down norms and standards about road widths, drains, street lighting, reservations for public uses, etc.
- (b) There are no arrangements to ensure that proper development is carried out before the land is allowed to be disposed of.³

THE PROBLEM OF PERSONNEL

The above discussions have amply indicated the type and level of administrative and technical staff that is needed to ensure proper understanding and due enforcement of bye-laws and the drawing up of zonal plans and schemes with a view to secure development through proper regulation and control. It has also been pointed out that the state governments are resorting to the device of special authorities to overcome technical, administrative and jurisdictional problems. But establishment of such special authorities so far has been confined to a handful of the over 3,000 towns and cities in India. Only the major cities and metropolitan areas have been provided with such a mechanism. The vast majority of urban areas have to manage with limited technical staff of their respective local bodies.

The work of enforcement has legal as well as technical planning aspects. The task of building regulation is usually entrusted to unqualified generalist inspectors, overseers or sanitary staff, depending upon the manpower availability and past practices and traditions in different municipalities. Technical supervision and guidance is minimal. Sometimes the sanctioning of some plans require reference to officers of the state town planning department. Such references only add to the difficulties of the citizens in form of delays and lack of communications in terms of technicalities. In a number of states, the posts of Regional Town Planners and in some cases even of District Town Planners have been created to ensure quicker disposal.

³*Report of the Task Force on Planning and Development of Small and Medium Towns, op. cit., p. 77.*

It has been seen that wherever such assistance and guidance is readily available and there is cooperation between municipal authorities and the locally stationed town planner, building and sub-division control and planned development steadily improves. This is quite evident at Aurangabad in Maharashtra.

In Andhra Pradesh, there is a separate cadre of Town Planning officers for municipal authorities under the administrative and technical control of the State Director of Town Planning. There are posts of varying grades to suit the needs of different levels of municipalities. Development control as well as implementation of schemes prepared under the Andhra Pradesh Town Planning (old Madras) Act, 1920 is the responsibility of these officials. It is also the responsibility of the Directorate of Town Planning to provide necessary training and guidance to these officers.

There is also the general feeling that local bodies with their financial constraints can ill-afford the luxury of employing town planning personnel. This is not always correct. It is more due to the absence of awareness and the lack of realisation of the importance of these measures for a worthwhile aesthetic as well as healthy environment. It is, however, possible that a number of municipal bodies would not be able to engage highly qualified town planners. Even if they are willing to do so, we do not have requisite manpower supply. The practice of having District Level Town Planners supervising town planning officials in the local bodies can go a long way to meet this need.

ORGANISATIONAL MACHINERY AND THE COUNCIL

One of the serious problems in effective functioning of municipal organisation is its executive structure. In some Acts, the power of sanctioning plans or hearing appeals against rejection of plans by the executive officer lies with a Committee of the Council. Often there is a feeling of frustration caused by the decisions of such Committees amongst technical and administrative officers.

There is also the interference and pressure from the elected members against demolition of unauthorised constructions. But the main difficulty is that the elected members in their individual and corporate capacity tend to have a case to case

approach rather than adopt a general policy course to undo the mischief of bye-laws, if any. It is the right of the Council to determine the norms and standards they want to adopt for their city after due consideration of technical and expert advice; and to adopt them by framing byelaws and regulations so that all citizens are treated equally. Once these are laid down the executive should be made responsible for enforcement. In fact the executive officials should be held accountable for any failure in enforcement. They should also have full control over subordinate supervisory and field staff which the present diffused pattern of municipal executive powers fails to provide. This calls for a strong unified executive system.

Last but not the least is the problem of legal provisions and procedures regarding the stoppage and demolition of constructions in violation of the acts and byelaws. The Acts provide for:

- (a) notice to stop construction;
- (b) demolition of construction against or without sanctioned plan by the individual;
- (c) on failure to act under (b), the right of the municipal authority to demolish at the cost of the developer or builder; and
- (d) prosecution which may lead to fine or in the event of continuing default to a recurring daily fine.

Prosecutions take a long time and result in comparatively low fines. What is needed is a system of summary or spot trials and fines. As regards stoppage of construction and demolitions, generally it ends up with some sort of court injunction and a long litigation. The construction work often goes on under the cover of injunctions as the local authority itself generally fails to obtain parallel injunctions against the individual. There is need for increasing the powers under law for demolition of unauthorised construction.

But apart from effective organisational machinery, the whole issue of development control is lined up with public choices and political will as expressed through political parties and higher level of authority. Political parties and the election interludes have been known to promote clandestine construction activity in Delhi and other major cities which are certainly equipped with

necessary expertise. No doubt that there are socio-economic forces to reckon with but there is need of minimal consensus on the shape and form of cities that we want. There is also the hard fact which is often ignored that mere negative controls and regulations are bound to fail unless they are accompanied by positive measures of land development and disposal and the provision of mass housing. The pace of this development has to be fast enough to match the pressures of growth and the demand for building sites at reasonable costs.

INADEQUACIES IN BUILDING REGULATIONS AND REMEDIAL MEASURES FOR EFFECTING CONTROL OF URBAN BUILDING ACTIVITIES

G. C. MATHUR

During the last three decades, the urban population has swelled due to heavy influx of population in urban centres in search of employment and attractions offered by city life. The phenomenon is popularly described as 'urban explosion'. It has resulted in preponderance of acute housing shortage and existence of slums and squatter settlements in urban centres. It is estimated that 25-30 per cent of the urban population lives in unsatisfactory housing conditions. The absence of comprehensive policy of urbanisation, land-use and housing—specially for the low income groups, is by and large responsible for uncontrolled building activities in urban centres.

PROBLEMS OF URBAN DEVELOPMENT

Despite formulation of town planning regulations and building byelaws for major urban centres in our country, effective control on building activities has not been possible and in many cases building activities have been undertaken in violation of the provisions of the building byelaws and the Master Plan on a scale that can cause concern to any urban administration. In metropolitan centres, the mushrooming of a large number of squatter settlements and unauthorised housing colonies and other types of constructions, indicate the extent of violation of building byelaws and regulations.

In smaller towns as well, disorderly urban growth has been taking place and non-conformity to building bye-laws is commonly practised. However, the urgency of the matter has not come to the fore. With rapid increase in urbanisation of smaller towns, the situation thereto is getting out of control as has happened in the metropolitan cities and large towns.

Broadly this situation can be attributed to the following factors:

- (a) In the heart of the city centres, due to high land values and fast growth of commercial activities, rents of buildings are high and additions and alterations have been frequently made often in contravention of the building byelaws.
- (b) Violations of master plans have been frequently made in developing new housing colonies as well as industrial and commercial units due to pressure of urban development.
- (c) On the periphery of the city, unregulated development has been brought about by speculative builders without giving due consideration to developmental regulations in force due to inadequacy of municipal administration to cope with the situation.
- (d) In the case of plotted development due to high land values and outmoded building bye-laws, large number of violations of building regulations have been made. On account of this, penalties for nonconformity to building byelaws have been levied in many cases to regularise constructions and from time to time modifications in the building byelaws have also been necessary.

NEED FOR REALISTIC APPROACH

The measures which have been adopted to regulate urban building activities have proved to be far from adequate. The work of preparation of master plans to promote the orderly growth of large urban centres was taken up rather belatedly. Moreover, in many cases the concepts on which the master plans were based have not been found to be in conformity with the dictates of practical requirements. For example, some of the notable characteristic features of Indian way of life which have not been properly accounted for while evolving the master plans relate to:

- (a) high density living in low-rise development to which the mass of population has been accustomed to;
- (b) buildings are used for work-cum-living in many commercial areas;

- (c) mixed-use is commonly found where people of different income groups reside in the same locality; and
- (d) the work centres and commercial activity centres are integrated within the residential sector and these are within walking distances.

The building byelaws framed by the municipal authorities, who are also incharge of its implementation, are by and large outmoded resulting in uneconomical use of land and constructions. These inhibit innovations as a result of recent advances in science and technology by the application of which not only the cost of construction could be lowered but buildings and structures could be made more efficient in their performance. Due to pressures of modern urban requirements, violations of building bye-laws have not been uncommon. Moreover, the lengthy procedures that are involved and the restrictive nature of the building bye-laws have led to their bypassing and undertaking construction work in an unauthorised manner taking advantage of the inadequacy of urban administration to cope with their responsibility. Inability to control such developments coupled at times with the pressure which unauthorised housing colonies and squatter settlements are able to muster for regularisation of such settlements at a future date, has resulted in many flagrant violations of the building byelaws.

By and large the municipal administration and urban development authorities have given inadequate attention to the work of control of urban building activities and this in a way has allowed the problem to grow to such an extent in certain urban centres that remedial measures are either not possible or they are very costly and difficult to implement. In dealing with the problem of this nature, which is vital for urban development and complexities of which will grow in size in years to come, it is necessary for the developing countries like India to identify the inadequacies in the building regulations and to take remedial measures. Some of the important measures that are suggested to effectively control building activities in urban areas include the following.

Rationalisation of Building Byelaws

The municipal administration and local authorities should

periodically study in depth the practical implications of the existing building byelaws and regulatory practices adopted by them, specially in the context of specific needs and exigencies of situation. Also feedback of experiences of house builders, architects, engineers and the town planners should be taken advantage of for modifying building byelaws. This is a continuing process to which adequate attention should be given. This would lead to rationalisation of building bye-laws and to a large extent, obviate non-conformity to them in future.

Permitting Innovations in Building

In an attempt to rationalise building practices based on present day scientific knowledge and technology, a National Building Code of India has been brought out by the Indian Standards Institution. The National Building Code is a comprehensive document aimed to ensure structural, constructional, fire and health safety of buildings and its occupants. Although the National Building Code was brought out as far back as 1970, laying emphasis on performance concepts of buildings with a view to promoting innovations in building for achieving economy in building, not much progress has so far been achieved in revising the local building byelaws of metropolitan cities, large and small towns. It is obvious that unless innovations are permitted by revising out-dated building byelaws, it will not be possible to cater to modern building requirements.

Guidelines for Low Income Group Housing

A number of squatter settlements, slums and unauthorised housing colonies have come to exist in which a large majority of urban population lives. This can be attributed to the fact that the existing byelaws and provisions of the National Building Code do not cater to the requirements of housing for the low income groups. The Development Group of Low Cost Housing aegis of N.B.O., the Ministry of Works and Housing under the constituted by recently recommended broad guidelines on evolving housing schemes to suit the requirements of the low income groups. The National Building Organisation, Indian Standards Institution, Housing & Urban Development Corporation and a few other agencies are involved in preparing detailed guidelines to cater to the requirements of housing for the low income group.

Also in order to enable implementation of low cost housing programmes for the masses, it is necessary to take a realistic view of the provisions of the building byelaw which come in the way of building houses at lower cost.

Guidance to Builders

The municipal administration permits only those architects, engineers and others who register with them, to prepare building designs, plans, etc., which they submit on behalf of their clients for approval by municipal administration. Often the clients and designers join hand to violate provisions of building byelaws anticipating certain penalties for compounding the violations. The client, therefore, needs to be educated about the importance of building byelaws and the advantage that accrue to them. The designers should also be consulted from time to time to understand their point of view and to benefit from their expert knowledge and experience for making such modifications as are necessary to the building byelaws arising out of modern requirements of building and land-use economy.

Preparation of Type Designs

In order to assist the common man in building his house, it is necessary for the municipal administration to provide him guidance so that he is able to fulfil his building requirements while conforming to the building byelaws. One way to achieve this, specially in the case of low and middle income groups of house builders is that the municipal administration may provide type designs of houses to suit various plot sizes, orientations, etc., conforming to the building byelaws. Should the house builder like to adopt any of these designs, the need for seeking approval from the municipal administration should be done away with. This measure will provide him incentive for straightaway adopting these designs; thereby conforming to the building byelaws. In case the house builder desires to have some modifications to meet his specific requirements, necessary technical guidance should be provided to him. Similarly, indicative type designs of other types of buildings such as for group housing, schools, health centres, community buildings, should be made available so that the builders are able to appreciate the implications of building byelaws. In order to provide a wide variety of attractive

designs, the municipal administration may hold design competitions from time to time to achieve this objective.

New Concepts of Urban Development

To cope up with the complexities of urban development in recent years in addition to municipal administration, urban development authorities have been created in metropolitan centres as well as large cities. One of the responsibilities entrusted to these authorities is to evolve and also implement the master plan for urban development and exercise control to ensure economical use of land and its development and to provide necessary urban services. The urban development authorities have a very important role to play. Their efforts are in fact intended to supplement the efforts of the municipal administration for exercising proper control of urban building activities. Various complexities of urban developments have to be resolved which call for new concepts, new ideas and new approaches. In this task it is becoming increasingly necessary to actively associate technical persons, like planners, architects, engineers and builders in formulating rational policies for urban development and for their effective implementation.

DEVELOPMENT CONTROL—SOME PROBLEMS OF ENFORCEMENT

D.D. MALHOTRA

It is increasingly being recognised that unplanned and uncontrolled urban growth does the maximum damage to public health, safety and general welfare. Greater reliance is, therefore, being laid on preparation and implementation of master plans for cities with a view to prevent haphazard urban growth. The fundamental concern of master plans is with the physical planning which seeks to direct urban development by allocating urban land to a variety of uses such as residential, commercial, industrial, recreational, etc. In fact, master plan is expected to evolve a viable and valid urban form by dealing with aspects such as size of an urban area, its density, its shape, the uses to which it is put and its conditions. The master plan broadly indicates the directions along which development should and should not take place. The effectiveness of the master plan, apart from other factors, is heavily influenced by the two inter-related conditions, namely: (a) positive development should take place in response to its forecasting of prospective demand for various kinds of land-use; (b) developmental activities incompatible with the master plan should be controlled. If the basic need of the people for shelter is not adequately met, the effectiveness of machinery for enforcing control will be adversely influenced. In this paper, an attempt has been made to highlight some of the problems in enforcement of development control.

The land-use strategies indicated by master plan to deal with the existing and future demands have invariably caused an adverse reflection on the master plan in the process of its implementation. Some of these problems are inherent in the master plan itself but considerably the problems of implementation originate from a wider spectrum such as absence of urbanisation policy, lack of organisational viability, inadequacy of resources, and incapacity of social and political climate to help achieve coherent social and economic objectives.

Urbanisation trends in India reveal a growing concentration

of urban population in a few larger cities. It has been frequently pointed out that the absence of urban policy has contributed to this lop-sided urban growth. It has put the master plans of cities wherever prepared, out of gear. The growth continues unabated posing serious problems to the planners. Should they accept the existing trends as given while preparing the master plans? If the forecasting of demand for various kinds of land-uses is based on existing trends, and the master plan gives specific direction to development to meet this demand, it will only further accelerate the alarming pattern of urban growth. It may also be accused of being highly ambitious since the resource scarcity will stand in the way of meeting the demand. If the demand is not met, the effectiveness of development control to prevent growth and to keep a lid on powerful forces of growth affecting land-uses will be severely limited. Enforcement problems will be equally strong if the planners inject their urban policy preferences at mirco level in the preparation of master plans. Alternatively, the planners may seek flexibility in the master plan to cope with uncertainties in the absence of a policy frame by reducing such plans to meaninglessness insofar as its capacity to provide guidance to those responsible for development control. Consider for instance the master plan of Delhi. It anticipated land-use development based on prospective demand of 46 lakh population to be accommodated by 1981 in urban Delhi. Now it is expected that it will have to accommodate 52 lakh population. While the demand has increased manifold, development of land particularly for residential use, has lagged behind. Despite firm statutory linkage between plan and control, the ineffectiveness of control is evident when one observes growing number of unauthorised colonies and constructions. Consequences of imbalance between demand and lawful supply have considerably contributed to the criticism of master plan as well as the agencies responsible for its implementation. Since development control defines limits within which lawful urbanisation could take place, a large and growing proportion of population belonging to lower income group can hardly afford to wait for the development of land and the cost of such development for their shelter. They find their shelter either by 'doubling up' in the existing structures or by constructing illegal structures to house themselves and to provide space for their

work. Proliferation of slums, squatting on public land, unauthorised constructions are the response to their needs. Social and economic segregation of large section of urban population is natural outcome which is fraught with dangers. The softness of the state is built-in in the process when politicians who promise to seek regularisation of unauthorised colonies have a chance to get the votes of the inhabitants. Further, the officials of the enforcement machinery for development control, the land speculators, the house owners each stand to gain while the master plan gets discredited and the enforcement machinery and the law-abiding citizens who do not dare to participate in the illegal scramble are the losers.

If the land-use planning is the basis of master plans, the control over physical development in regard to use to which land can be put, the appearance of buildings and landscape, the alignment of streets, densities of development, etc., become critical. If the plan earmarks areas for open spaces, the development control has to prevent the building of houses in that area, if the plan provides for turning a hotchpotch of commercial, industrial, residential uses into a systematic pattern of land-use most conducive to public health, safety and general welfare, the development control has to ensure precluding any more of uses not in conformity with the plan in that area. If the master plan or zonal plan lays down optimum population densities and land necessary for community facilities for these densities, the development control has to regulate the construction activities by prescribing building specifications. Development control being a regulatory tool heavily relies on the use of police powers of the state.

Many states have statutes of one kind or the other which provide for a measure of development control even for areas for which master plans are not yet available. Where master plans have been prepared, the absence of statutory provisions dealing with land-use control and zoning regulations, have kept the plans to the level of intentions only. Various kinds of controls and agencies for their enforcement have been in existence insofar as urban building activities are concerned. Municipal governments have been long empowered in controlling urban building activities, but their concern essentially has been confined to set standards of construction by which public health

and safety could be ensured within its territorial jurisdiction. They had little capacity to control urban change and regulate and promote urban growth in a planned manner either within their jurisdiction or on its fringe. Improvement Trust were set up in some states to undertake positive action and prepare a design for urban development for some of the important cities. But they exercise development control in areas under their schemes. In response to worsening urban situation, a wide range of special purpose bodies such as Housing Boards, Water and Sewerage Board, etc., were incrementally added to supplement the organisational inputs for urban management. These agencies have a chunk of developmental control or heavily influence it directly or indirectly. In addition, Town and Country Planning Department of the State Government is also empowered to exercise development control particularly in the periphery areas. Distribution of powers for development control amongst the multiplicity of authorities engaged in urban development but operating at times in total isolation to each other has caused a fragmentation in approach to development control. The trend is towards setting up of multipurpose planning and development authorities equipped with wider jurisdiction and powers with a view to develop some kind of corporate approach at local level to comprehend the complexity of urban crises and to direct urban development to contain them. While considerable progress has been made in evolving organisation for preparation of master plan, a viable enforcement machinery equipped with adequate powers for development control continues to be an unresolved problem.

The most important tools of development control in cities continue to be municipal enactments and building byelaws made thereunder and municipal administration provides the enforcement machinery to exercise development control within its jurisdiction. Municipal Acts and byelaws empower municipal bodies to exercise control over sub-division, to sanction layout plans and to regulate construction and erection of buildings. For instance, the Delhi Municipal Corporation Act, 1957 requires all sub-division and lay out plans to be sanctioned by it. Erection of buildings is governed by building byelaws. In the light of the master plan, the building byelaws were revised to make them a fit instrument for development control in

areas other than those designated as 'development areas.' For the 'development areas' the enforcement of development control remained the responsibility of DDA. The Building Byelaws No. 25 specifically provides that 'Notwithstanding anything contained in these bye-laws, no buildings shall be erected or allowed to be erected in contravention of Master Plan or any zonal development plan'. Further, the Byelaws regulate building activities in different use-zones by prescribing the minimum size of plot, frontage, setback (front, rear and side) number of storeys, coverage on each floor, etc. The Byelaws also deal with structural specifications including those related to safety, health and sanitation. However, where there is absence of statutory provisions of land-use control/zoning regulations, master plan prepared can hardly direct development of land. Effectiveness of development control under state municipal legislations and building byelaws made thereunder, has been subjected to considerable doubts; sub-division of lands without necessary approval of layout plans and unauthorised construction continue with vigour taking advantage of the weaknesses of municipal enforcement machinery and the defects in Municipal Acts and building byelaws made thereunder.

Amongst the weaknesses of the enforcement machinery of urban local bodies, lack of adequate powers of enforcement is often mentioned. Though it is obligatory to get sanction of building plan before starting construction, if one does not do so, the enforcement machinery at times find itself handicapped to take necessary action because of the long procedure of issuing notices and eventually by court injunctions. By the time necessary formalities have been completed and legal hurdles overcome, successful mobilization of support from police and other departments secured, the number of similar constructions in the same area might have multiplied manifold giving social and political dimensions to any act of demolition. The unauthorised colony born under such circumstances will eventually seek regularisation. Another factor which contributes to ineffectiveness of the enforcement machinery is the lack of coordination between the Registration Department and the municipal administration. In the absence of any provisions requiring Registration Department to register only those sale transactions of lands of which layout plan has been sanctioned by the municipal body,

the landowners continue sub-dividing land into plots and selling them without regard to the requirement of controls stipulated under municipal laws. Such transactions, apart from becoming the basis for violation of byelaws subsequently, also impose heavy financial burden on municipal bodies once they take over these unauthorised colonies. It is necessary, therefore, to plug these loopholes with necessary modification of law so as to ensure necessary coordination between the agencies responsible for effecting transfer of land and those which are required to ensure its proper development.

Quite frequently it has also been pointed out that the local bodies do not make effective use of the powers they already enjoy. The laxity in enforcement gives sufficient scope for indulgence in unauthorised constructions and uses. The integrity of enforcement staff at the field level is often questioned. There is a widespread impression amongst the citizens that it is more important to satisfy the officials engaged in sanctioning of building plans than the building byelaws. Securing of a completion certificate after having constructed the building is inviting the mercy of a building inspector. Equally important factor in contributing to the laxity is the technical competence of field level officials responsible for scrutinising of the building plans and issuing of completion certificate. Most of the municipalities do not have qualified and trained technical staff for this purpose. Another weakness of the municipal enforcement machinery is the poor intelligence system both in regard to detection of unauthorised constructions and uses and in respect of generating relevant information which the agency responsible for development control should monitor for review of plan and activities of other departments. For instance, information regarding concentration in part of a city of a considerable number of applications for extension to existing houses or change in land-uses or of intensity of unauthorised construction and uses may not only give clues to population distribution and its socio-cultural dynamics, demands for various kinds of uses, etc., but also may serve as an early warning for further changes which might be needed in framing policies for water supply, electricity, schools, sewerage, transport and other utility services. The point is that the effectiveness of development control depends upon information system which can also provide the

necessary links between planning and control and amongst various agencies responsible for urban services. This type of information system has not yet been developed in most of our local bodies and urban planning agencies, and thus the potential relevance of development control to policy planning has been largely ignored. Lack of effective coordination between the licensing authority and the enforcement agency for development control, even within municipal administration is another factor which contributes to the violation of uses of land stipulated under master plans.

The delays and harassment experienced by citizens in getting building plans sanctioned, and the provisions of 'compounding' often prompt them to resort to unauthorised constructions. Acute shortage of well qualified licensed architects and draftsmen in most of the towns and laxity in effecting control over them are partly responsible for delays caused by submission of defective and incomplete plans. Equally important, however, is the impression amongst the citizens about architect's success rather than his competence in getting efficiently the sanction of plan through whatever means. This creates a climate of 'selective delays'. There is hardly any attempt to provide guidance to citizens in case of defective plans.

Apart from the above-mentioned weaknesses of the municipal enforcement machinery responsible for development control, inadequacy of building bye-laws as tools of development control has been frequently pointed out. The Task Force on Planning and Development of Small and Medium Towns and Cities observed that 'building bye-laws are very sketchy or they do not cover the total concept of city or town development in the form of development control followed by building rules and schemes for the city such as water supply, drainage, transportation'. Indian Standards Institution while recommending the National Building Code also observed the following defects of building byelaws:

- (a) The current byelaws, wherever they exist are outdated;
- (b) They do not cater to the use of new building materials and to the latest developments in building designs and technology;
- (c) They lack uniformity; and

- (d) They are more specification oriented than performance oriented.

It is necessary, therefore, to revise the byelaws and bring them in line with the requirements of development control envisaged under the master plan.

While attempts have been made in some cases to revise byelaws in order to make them viable tools of development control, another aspect of the byelaws which has drawn the attention of many people is the standards or norms of constructions prescribed. It is often felt that house construction in accordance with the standards of constructions laid down under bye-laws can be afforded by only a small fraction of the people. While it may be true that such standards are minimum for a reasonably decent urbanisation and for the health and safety of the people, in the face of growing need amongst those who cannot afford to comply with such standards and limited means of enforcing these standards, their violations are inevitable. It may, therefore, be necessary to consider different standards for different income groups, while avoiding social and economic segregation of lower income group of urban dwellers.

DEVELOPMENT CONTROL—SOME LEGAL ASPECTS

M. K. BALACHANDRAN

In a country like India where the citizen is guaranteed under a written Constitution certain fundamental rights which cannot be interfered with, save by authority of law, development control can be effectively exercised only with suitable legislative support. This point was amply illustrated by Mr. Justice Krishna Iyer in one of his articles on 'Law and the Plan' where he observes: "The planner must realise that every economic project he has in mind involves interference with private rights, and so, must be justified by law. Every taxation measure that he contemplates must be in accordance with the procedure prescribed by law, every organization that he sets up, such as a public corporation, cooperative society, charitable society, commission or board has to be structured by the law so that its internal regulations and external relations may have its validity. Every policy decision for nationalisation or state monopoly, prohibition or control over, or diffusion of, private ownership, needs the authority of the legislation subject to the Constitution." The Supreme Court was expressing the same view differently when it said in one of its recent judgements: "Beneficial schemes under welfare legislations have to be executed in accordance with the law which creates the schemes. The end does not always justify the means and it is no answer that the object of the scheme is such that it justifies the implementer of the law to be absolutely oblivious of the manner of enforcement even though the manner is an integral part of the scheme imposing under the law, restrictions on the rights of individuals." The point that is intended to be brought home is that the planner cannot ignore the law either in controlling haphazard development or in bringing about a planned development—the negative and positive aspects of development control.

The need for legislative support for development control was recognised in our country in the last quarter of the previous century when the Municipal Acts made provisions for various types of development control. These legislations which had their

origin in India during the British period generally contain a number of provisions, though not very effective, for exercising control over the development of land and building so as to bring about orderly growth of cities and towns. The powers thus granted include regulations of construction activity, sub-division of lands, demolition of unauthorised constructions and dangerous structures, removal of encroachments and congested buildings, prevention and prohibition of public nuisances, regulation and abatement of offensive or dangerous trades and practices and taking various other measures to promote the safety, health, convenience and general welfare of the public.

There are provisions in the Municipal Acts to regulate sub-division of lands by laying down the conditions for the sanction of such sub-divisions. Similarly, any erection or re-erection of a building or the making of any addition, alteration or repair of any building, requires the sanction of the municipal body as per the mandatory provisions of the Act. Thus the control extends not only to the erection of new buildings but also to the re-erection, repair or material alteration of any building. The building constructions are also subject to the provisions of the building byelaws framed under the municipal enactments. These byelaws generally specify the standards relating to the structural safety of the buildings, internal dimensions of the rooms, lighting and ventilation, open space to be left around the building, etc., which are considered to be necessary to protect the health and safety of the individuals and that of the general public.

The Act also gives adequate powers to the authority to demolish any building constructed without sanction or in contravention of the conditions of the permission granted and to stop such constructions in case the construction is not completed. Some of the legislations even place restrictions on the use of land and buildings by prohibiting the change of use of any land or building without the written permission of the authority under the Act. Similarly, there are provisions for the framing of improvement schemes and rehousing schemes which involve the relaying out of any land comprised in the scheme, the construction or reconstruction of buildings, demolition of obstructive buildings or portions of buildings unfit for human habitation, redistribution of sites belonging to owners of property comprised in the scheme, etc.

Another important aspect of development control which the municipal enactments generally deal with is environmental protection through the prevention and suppression of 'nuisance'. They are generally aimed at combating environmental pollution at the local level. Under these provisions, the municipality has wide powers including the right to refuse permission for the establishment of any factory or workshop in any area if it is satisfied that such establishment would be a 'nuisance' to the inhabitants. It can, under the Act, even prohibit certain trades in particular localities or require them to make structural alterations so as to prevent them from creating pollution problems.

It may appear from the brief account given above that the municipal law has all-embracing provisions for proper exercise of development control, but the picture is not as bright as one would expect it to be. Except in the case of some major municipal corporations, many of these provisions have not been generally invoked by the municipal bodies because of various reasons, such as lack of resources, personnel, technical know-how, etc. It may also be pointed out here that local government system in India came into being at a time when the rate of growth of urbanization and industrialization was not that alarming. Cities and towns were small and manageable and as such the municipal bodies were mainly concerned with the task of providing certain basic amenities to the local inhabitants along with certain regulatory functions like building regulations, abatement of nuisance, etc. Naturally, therefore, they were not playing any prominent role in the developmental activities. The obvious result was haphazard and unplanned development resulting in congestion, slums, squatting and abuse of land.

The inadequacy of the municipal law and the indifferent and casual enforcement of the available provisions paved the way for the enactment of Improvement Trust Acts with the object of preparing improvement schemes for specific areas indicating the use and reuse of land including land acquisition, redevelopment and disposal. Their functions, however, were limited but compared to municipal bodies their jurisdictions were wider in the sense that they were not confined to the administrative boundaries of the municipal bodies and could be extended to include peripheral areas also. The powers of regulations, control

and implementation of any scheme of development and redevelopment were vested in the Trust even if the scheme related to an area within the municipality. The Improvement Trusts constituted under these Acts prepared action-programmes for specific areas without any conception of the overall plan and development requirements of the city as a whole.

Along with the Trust Acts, some of the states had enacted Town Planning legislations providing for the preparation of town planning schemes and in certain cases for master plans for towns and cities. These legislations provide for additional powers to planning authorities including urban local bodies for the preparation and enforcement of various planning schemes and development programmes. Later the Town and Country Planning Organization of the Government of India formulated the Model Town and Country Planning Law with a view to encourage the making of planning legislations by the states on more or less a uniform pattern and some of the states have since revised the existing legislations in the light of the model law.

The need for regional planning with appropriate legislative support was first put into practice by the state of Maharashtra through the enactment of Maharashtra Regional and Town Planning Act, 1966. This Act was the outcome of the realisation that the preparation of development plans for areas confined within the municipal limits would not meet the problems of urban development which usually spilled over beyond municipal limits. The Act made provisions for planning and development and use of land on a regional basis and for the constitution of Regional Planning Boards and for the creation of New Town Development Authorities. This was followed by similar enactments in other states also. Thus apart from the Maharashtra Act, the Tamil Nadu Town and Country Planning Act, 1971, the M.P. Town Planning Act, 1973, etc., provided for the preparations of regional plans also along with the master plans and town planning schemes.

The recent trend in development control through the creation of Development Authorities charged with both planning and development functions started with the establishment of the Delhi Development Authority under the Delhi Development Authority Act, 1957. At present many states have similar type of legislations, the latest being the Gujarat Town Planning and

Urban Development Act, 1976 which provides for the establishment of Area Development Authorities and Urban Development Authorities.

Apart from the various types of planning laws mentioned above, several other legislations dealing with one or other aspect of development control having limited functions and jurisdictions are in existence in a number of states. These include, Slum Clearance and Improvement Board Act, Housing Board Act, Building Repairs and Reconstruction Board Act, Regulation of Building Operations Act, Periphery/Ribbon Development Control Act, Water Pollution Control Act, Urban Land Ceiling Act, Urban Art Commission Act, etc. In the state of Maharashtra the laws relating to housing, repairing and reconstructing dangerous buildings and carrying out improvement works in slum areas have been consolidated into one single law known as the Maharashtra Housing and Area Development Act, 1976. It may be worth mentioning here that even such innocuous looking legislation as the Maharashtra (Urban Areas) Preservation of Trees Act, 1975 has provisions which exercise indirect control over development activities. This Act which provides for the preservation of trees in urban areas, and the establishment of a Tree Authority and appointment of Tree Officers for carrying out the object of the Act, provides that permission for development of land can be granted only with the approval and subject to the conditions, if any, imposed by the Tree Officer in regard to the preservation and plantation of trees on such land.

The above survey indicates that there are more than enough laws for exercising control over development in one way or the other. However, the enforcement of development control is marginal because many of these legislations are inadequately or unrealistically designed and are found to be deficient in effectively dealing with haphazard urban growth and in bringing about a planned development. Some of the defects and deficiencies in the existing legislations are discussed below.

As already mentioned, in many of the states there exists a large number of legislations dealing with one or the other aspect of development control, each legislation having been enacted with a view to meet the requirements of particular situations or problems without taking into consideration its impact on the working of the organizations/agencies functioning under

other legislations already existing in the area. In other words, the approach has been piece-meal and a sort of "immediate problem-solving-oriented" approach, in the sense that it is more often than not directed towards getting immediate relief without bothering about its impact on other legislations. This in its turn has resulted in a multiplicity of authorities/organisations in the same area dealing with development control having sometimes overlapping functions and jurisdictions. The victim always is the ordinary citizen who has to pass through a circuitous process, say, in getting his building plan sanctioned resulting in practical difficulties and sometimes even harassment. New authorities and organizations are being set up on ad hoc basis without caring much about their repercussions on the already existing ones creating problems of conflicts and coordination.

Taking particular cases, it may be pointed out that the municipal law which contains a number of provisions for dealing with development control and which had its origin almost a century ago is certainly archaic and outmoded and cannot be used effectively for development control. This is true of the powers under the Act to control subdivision of land, building constructions and environmental protection. And it is equally true in the case of building byelaws which were designed, in many cases, at a time when the science had not developed. New housing requirements, new building techniques and new land-uses demand a new approach in designing the building byelaws. The existing byelaws, it has been rightly pointed out, are more often than not 'specifications oriented and not performance oriented'. The National Building Code published by the Indian Standards Institution has made a good attempt to unify the building regulations throughout the country and has acted as a model for some of the local authorities in revising their byelaws and bringing them in tune with modern conditions.

Another defect of the existing byelaws is that in many cases it is more oriented towards the need of the rich. For instance the setback, etc., laid down in certain areas are excessive and cannot be meant to subserve the common man. It is pointed out that even the National Building Code does not cater to the housing requirements of the low-income groups and the economically weaker sections of the people. This

defect has to be rectified.

Yet another drawback of the existing bye-laws is that they are restriction oriented. In our country where public housing programme is well-nigh impossible and where demand for housing is ever increasing, the rules and regulations regarding, house constructions should be flexible enough to facilitate construction activities with minimum conditions. Further, byelaws should have a multiple approach for different sections of the people in the same locality and for different areas and should take into consideration the financial and other limitations of the individuals.

Regarding Town Planning legislations also it may be mentioned that they were first introduced in the country during British rule and as such were mainly based on the British pattern prevalent at that time. After independence many of these legislations were either revised or new legislations were enacted, but still were, broadly speaking only an elaboration of the old British law. Obviously, therefore, many of these legislations failed in the field in their attempt to effectively control haphazard development. For instance in many cases, the law does not provide for the prevention of unauthorised development during the period between the notification declaring the intention to prepare the development plans and the actual preparation of the plan. By the time the plan is prepared and finalized a lot of haphazard development would have already taken place thereby making the implementation of the plan difficult if not impossible. This loophole in the law has to be plugged.

Another deficiency which is noticed in many legislations is that they do not provide for the control of the peripheral growth or ribbon development, even though some states have separate legislations which provide for negative control at the periphery without any regular machinery. It is gratifying to note that in some of the recent legislations attempt is made to deal with this situation.

Another deficiency noticed in many legislations is that the powers, responsibilities and resources of the organizations are not properly matched so as to enable them to deal effectively with the development control problems.

It may be pointed out here that acquisition of land presents the first serious problem in the implementation of development

schemes. The majority of the planning legislations are still dependent on the Land Acquisition Act of 1894, under which the procedure is tardy and time-consuming and the compensation to be paid is the just equivalent of the market value. Some of the town planning legislations have modified the provisions of the original Land Acquisition Act to facilitate speedy acquisition at lesser costs but they have failed in the court on the ground of 'unjust discrimination'. The feasibility of a separate acquisition law for urban development may be worth discussing.

It may be worth mentioning here that the state of Maharashtra has taken the lead in consolidating the laws relating to housing, repairing and reconstructing dangerous building and carrying out improvement works in slum areas. It is, in fact, a consolidation of the Housing Board Act, the Bombay Building and Reconstruction Board Act, the Maharashtra Slum Improvement Board Act and the Nagpur Improvement Trust Act which was repealed under the new Maharashtra Housing and Area Development Act, 1976 (but was again revived within a short time). This is a healthy attempt to deal with the evil effects of multiplicity of legislations in the area of development control and can be attempted in other states in our country.

MUNICIPAL ENFORCEMENT MACHINERY : MYSORE CITY

S. D. SYIEM

Mysore city was one of the first cities in India where the need for development control was felt right from the beginning of the present century. The first City Improvement Trust Board Act in the country, namely, the City of Mysore Improvement Trust Act was enacted as far back as 1903, providing measures for the improvement and planned expansion of the city of Mysore. No development of the city could take place without the approval of the Board of Trustees set up under the Act. The Board undertook the preparation of layout of all the areas where future expansion has to take place. Even the formation of new plots in private land within the city must be approved by the Board.

At present there are three legislations which provide for the control of building activities in the city, *i.e.*, (i) The Karnataka Municipal Corporations Act, 1976; (ii) The Karnataka Town and Country Planning Act, 1961; and (iii) The City of Mysore Improvement Trust Act, 1903. Prior to the coming into force of the Karnataka Municipal Corporations Act, 1976, and the Karnataka Town and Country Planning Act, 1961, the City of Mysore Improvement Trust Act, 1903, and the Mysore Municipalities Act, 1933, were the two legislations under which control of all building activity and development of the city were regulated. There were regulations with regard to the alignment of building and set-backs, and the rules pertaining to the architectural style of buildings were particularly insisted upon. The Municipality acted as the authority granting the final building licence, but subject to the technical approval of the Board in such areas where the layout had been formed by the Board. The enforcement of the various provisions and prevention of unauthorised constructions vested with the municipality.

With the coming into force of the Karnataka Town and Country Planning Act in 1963, the stress on the planned growth and development of land-use further increased. A local Town

Planning Authority was constituted and the development plan for the city was notified in 1972. The Chairman of Town Planning Authority is also the chairman of the City Improvement Trust Board and the Commissioner of the municipal corporation is one of the members. The Karnataka Municipal Corporation Act also lays down that the exercise of powers by the Corporation shall be in conformity with the provisions of the Karnataka Town and Country Planning Act with regard to any matter relating to land-use, and no permission or sanction shall be granted if it relates to any matter for which the clearance of the Town Planning Authority is necessary. Similarly, all future expansion and layouts of the City Improvement Trust Board shall also be in accordance with the master plan prepared by the Town Planning Authority.

However, the City Improvement Act and the Town Planning Act provide for the overall control and planning of the development of the City, and it is under Municipal Corporations Act that the statutory power to deal with the enforcement for the control of building activities has been vested with the Corporation. Under the Corporation Act, byelaws are also framed for the regulation and restriction of the use of sites and buildings, and for control of all building activities. Buildings are required to be constructed after obtaining prior approval and sanction of the corporation and in accordance with various provisions of byelaws dealing with zoning regulations, set-back, floor area ratio, etc.

The enforcement machinery for the control within the Municipal Corporation is the Engineering Department. It is the duty of the Commissioner to ensure that no construction takes place within the city without proper sanction, and wherever there are cases where constructions have been made unauthorisedly, he is required to take proper action which may either seek removal of the unauthorised construction or regularise it if the conditions specified are satisfied.

As stated earlier, the control of building activity consists of: (i) prevention of all unauthorised constructions, and (ii) the removal of unauthorised construction or their regularisation. Regarding the enforcement of (iii), no construction can be carried out without the prior sanction of the Commissioner. By and large the cases where constructions have taken place without

such prior sanction are restricted mainly to instances where squatters have constructed huts or semi-permanent building over-night in a group and which ultimately results in the creation of slums. There are seldom, if at all any cases where permanent buildings are constructed without prior sanction of the Corporation. There may be unauthorised additions or alterations to building which may be carried out by persons without obtaining prior sanction. Direct action to remove the unauthorised construction carried out by squatters cannot always be taken owing to various reasons. In such cases, the persons who are involved are all siteless and houseless and whose need to get some shelter over their heads drives them to squat in any open land available and put up dwellings for themselves. These are not cases where there is a deliberate attempt to bypass the rules and regulations and carry out the unauthorised construction. Moreover, once a group of people come together either on their own or led by a person from outside, it immediately becomes a highly sensitive issue. It reflects on the city administration and its inability so far to provide its citizens their very basic needs of protection and shelter. It becomes difficult, therefore, for anyone to order their removal or demolish their dwellings. The proper approach would normally be to secure proper dwelling sites for them, or undertake suitable housing schemes for them. But this involves time, and if things get prolonged, the unauthorised constructions continue. Hence, it is not always possible to tackle this problem in the regular course by the enforcement machinery. In most cases it is such building activities which bring down the standards of the city and give rise to congestion and unhygienic conditions, social problems and crime and tension in the city. Hence, so far as this particular problem is concerned, the enforcement machinery laid down for the regulation of building activity comes up against heavy odds and fails to fulfil the role.

It is often felt that once any unauthorised construction has been allowed to come up unnoticed, it is very difficult to remove the building after it is completed. If the unauthorised construction is noticed in the beginning, steps can be taken to get it dismantled or removed. Under the law, a preliminary order should be served on the party asking him to remove the unauthorised construction, and after granting a reasonable time

for him to show cause why such an order should not be made final, the final order should then be passed. If the party fails to comply with the order, the Corporation can demolish and collect the charges from the party. This procedure is also followed in cases where deviations have been carried out by the party which are not in accordance with the sanctioned plan. A disallowed top floor, projections into a public street, projecting the building beyond the existing building line, non-observance of set-backs prescribed, violation of zoning regulations, and other deviations often may go on with the connivance of the lower staff or without their knowledge. It is here that we often run into difficulties in enforcing our rules and regulations strictly. The enforcement machinery, therefore, needs an effective system of detecting the deviations and of taking action in time. The deviation are of two types: those which can be regularised by charging a compounding fine and those which cannot be compounded. However, in many cases, once the preliminary order is served on the delinquent party, he proceeds to a civil court and obtains an interim stay order, and once this has been obtained, justice takes its own time, during which those who are familiar with the pressures at work in local administration know that pressures are brought upon the authorities to compound the case and regularise the contruction. There have been several such cases.

The table below gives the total number of building licences issued by the Mysore City Corporation from 1972-73 to 1977-78, the number of deviations detected and the total number of unauthorised construction which were carried out without licence.

TABLE

Year	No. of building licences issued	No. of deviations made at of (1)	No. of unauthorised constructions
1972-73	2190	33	44
1973-74	2100	28	23
1974-75	1964	18	16
1975-76	2139	10	47
1976-77	1618	17	88
1977-78	1521	24	28
(up to Feb. '78)			

It reveals that the number of unauthorised constructions carried out without licence is small compared to the total number of licenced constructions, also the proportion of the number of cases of deviations to the total number of licenced building constructions is very small. The table, of course, excludes the total number of buildings constructed by governmental bodies like Public Works Department, Housing Board, City Improvement Trust Board and the City Corporation on a large scale basis. These figures exclude about 800 huts which have been enumerated on the slum clearance programme for the city and which had come up without licence during the course of the last 10 years.

LAND-USE CONTROL AND ITS ENFORCEMENT IN WEST BENGAL

C. MOZUMDAR

In town planning terminology, by land-use planning we mean orderly use and development of land. While town planning has economic and social effects, a land-use plan is conditioned by socio-economic elements. It is primarily concerned with the physical environment. It deals with the location and extent of various uses and activities including structures. It also deals with horizontal and vertical relationships of buildings and uses.

The term land-use planning includes planning for other than real property as well. Most activities take place on land, but planning the activities on water is as closely related to land-use planning as water is related to land. Buildings are also real property and all activities inside a building and its relationships to land and other structures including their uses are important components of land-use planning. A town planner tries, through the provision of various kinds of controls and inducements, to shape future land development and preserve existing land development without radical changes. The primary legal tools for effectuating land-use planning include such police power regulation as zoning and subdivision plotting controls, including official 'mapping' for the same.

Building and housing codes which fall also under police power, usually have limited coverage in materials dealing with land-use. The reason is that these deals largely with physical insides of structure and not the use of land as such or how the building is related to surrounding uses. But these are also important in the context of total development of any area and should form a part of comprehensive acts on planning and development.

Nuisance law is also a land-use control device which is employed to reduce gross effects arising out of land-uses. Apart from land-use Control Acts or Zoning Acts, some states in India have passed Air and Land (including water) Pollution Acts.

Fiscal measures are also used as tools to influence land-use. Since these tools are primarily used to raise revenues and redistribution of wealth, they are not generally well adapted to land-use control measures.

Land-use planning till now in India is yet to be fully accepted as an exercise to be carried out by local authority. It is predominantly being done by the state government either directly or through the institution of development authority. Therefore, government involvement in land-use control is substantial as can be seen from various provisions of Land-use Control Acts or State Town & Country Planning Acts.

Development control by state in any planning area generally presupposes existence of a physical plan for development of that area, classification of land into various kinds of uses including agricultural uses and conservation areas. Since existence of a physical development plan in most cases is a precondition of imposition of such restrictions, normally such an Act is used in urban areas where plans are ready. However, in West Bengal, the law has been applied almost throughout the state before any development plan has been prepared for most of the areas. This has given rise to many problems. But in this paper, an attempt has been made to discuss some provisions of the Calcutta Metropolitan Planning Area (Use and Development of Land) Control Act, 1965, popularly known as CMPA Act, 1965, with a view to highlight the kinds of functions the enforcement machinery is supposed to discharge and the problems it faces.

FUNCTIONS IDENTIFIED UNDER THE CMPA ACT, 1965

Section 4 of the CMPA Act, 1965 has enabled the state government to divide any controlled area or a part of it into various use-zones as may be deemed best suited to carry out the purpose of this Act. Within each zone it is possible, through directions and regulations, to regulate and restrict the erection, construction, reconstruction, alteration, major repairs and use of buildings, structures, or land. But to make such control measures constitutional, it is necessary to have a (comprehensive) development plan so that such directions and regulations could be issued in accordance with the plan. Such regulations are normally made with reasonable consideration,

inter alia, to the character and suitability of the zone for the most appropriate use of the zone.

Subsequent sections of the Act deal with procedure for finalising the zoning plan. The Act also permits an officer of the state government, not below the rank of a Deputy Secretary, to consider the objections and suggestions of the public and submit his recommendations to the state government for modification, if any. Finally, the Act also contains provisions for enforcement of the regulations.

The Act, perhaps did not contemplate adoption of temporary interim measures as have been done in West Bengal. But use of the Act for interim purposes, though justified for a temporary period, is bound to complicate the problems of enforcement in course of time.

The Act under Section 8 (2) makes it obligatory on the part of the controller to make enquiry. All decisions are normally based on the result of such enquiry made by an inspector. Any infringement or violations of the Act are dealt with under Sections 10 and 11. Under Section 10, a violation of the Act or the directions and regulations issued under it are declared to be a misdemeanour punishable by fine. Civil penalties are also authorised. In order to stop unauthorised construction or use, the Act also authorises the controller to take appropriate action or institute proceedings in a court of law.

PROBLEMS OF ENFORCEMENT

Despite the legal powers given under the CMPA Act, the enforcement is very much lax primarily because the enforcement machinery suffers from acute shortage of qualified manpower. Till now, there is only one technical officer at the headquarter who is working part-time on enforcement and two other officers are helping him on part-time basis. Except in one small area, in other areas of state there is no qualified official to handle the problems of enforcement. At the district level, complaints by citizens who are adversely affected are naturally ignored and in many cases, where violations are discovered, no legal action is taken against them, beyond in accordance with the provisions of law. The required machinery for initiating legal action has not been set-up after serving the notices for demolition. There is

no inspection or check on cases after permission has been granted. It is quite logical to expect that many buildings and structures will be used for purposes not permissible under the Act. Occasional area-surveys are necessary to discover use-violations, but no such programme has been undertaken.

There are other difficulties as well. The first enforcement of the Land Use Control Act, 1965, in West Bengal has been attempted in Ultadanga-Maniktala Control Area and VIP-Road area, an outline plan exists for Ultadanga-Maniktala Control Area, where broad land-use zones have been demarcated along with identification of compatible and incompatible uses for each kind of zone. This plan therefore allowed some variety and limited experiment in mixing land-uses within each zone, but it is virtually impossible to describe the system thoroughly or to predict land consumption rationally and scientifically—one of the basic tasks of planned urban development. This difficulty is primarily because of absence of rational analysis of neighbourhood needs and characteristics required to plan an economic and convenient arrangement of uses.

There is also another problem. Since land-use control applies to both existing and new development, there is no clause in the Act which shall not permit continuance of existing non-conforming uses beyond certain period of time. In fact, such omission has given rise to peculiar problems of implementation. In a residential zone within the Ultadanga-Maniktala Control Area, an owner has applied for permission to construct residential quarters over an existing one-storeyed industrial building which is non-conforming in nature but being allowed to exist without any limit on its life. If now permission is refused, it shall be contrary to law and if allowed, it shall be contrary to health and welfare of future occupants of the building over a factory. Suitable modification of the Act, therefore, seems to be the only way to tackle this kind of problem.¹ Till then, the problems of enforcement remain.

A wide range of problems also emerge in case of enforcement of housing codes, though fortunately housing codes are not

¹For further elaboration of the problem of implementation of CMPA Act, see C. Mozumdar, "Reflection on Existing Land Uses Control Measures in West Bengal", *Nagarlok*, pp. 49-53, vol. ix, no. 3, (July-Sept. 1977).

incorporated under the CMPA Act, 1965. Some of the general problems of enforcement of housing codes are discussed below.

A housing code primarily deals with internal more than external aspects of the structure. Generally its violation comes to the notice of the authorities either through private complaints or as a result of physical survey undertaken by enforcement machinery. Whatever may be the case, once the matter is accepted as a violation of the code, the landlord is served with a notice of hearing and there is then an official finding that the violation exists. The authority thereafter orders for repairs or asks for correction. After the period of compliance is over, reinspection is generally carried out. If the desired action is not taken during the period of compliance appropriate orders are issued. Generally such orders require vacating the buildings where such buildings are unsafe, or repairing the buildings or even demolition of the same. If such orders are not carried out, the authority can impose fine. Some laws are stringent enough to place the owner in prison in addition to imposition of fines. But hardly such steps are taken in India.

Recently, Calcutta Municipal Corporation, which is responsible to enforce housing codes within the municipal jurisdiction has proposed to set up a statutory House Repairing Board whose primary function would be to undertake repair work and gradually recover the cost in those cases where the owners would fail to carryout the order of the authority for repair, etc. This authority could collect rent and make repairs out of the rents. Under the West Bengal Premises Tenancy Act, 1936 a tenant after notifying the landlord through the Rent Controller, can carry out repairs, etc., himself and deduct the expenses from the monthly rent. In many developed countries, housing code provides that a tenant may sue for damages if injured as a result of an injury caused by violation of the housing code. In brief, code violations may allow the tenants to seek redress from either the enforcement machinery or from a court of law and in both the cases legal functions are quite elaborate. Tenants generally feel reluctant to approach the enforcement machinery because of malpractices and the likelihood of eviction on the ground of safety. The problem becomes more complex if we look at the multiplicity of agencies under different statutes dealing with similar problems. Inadequacy of trained staff,

corruption and other malpractices add to the complexity of problems. It is generally found in dealing with court cases that prosecutors, not belonging to the enforcement agency are unfamiliar with housing code law and they have little time to inform themselves about a particular case.

The problem of enforcement of housing code is essentially an economic one, and hence some planning policy issues are involved. For example, what step the law should take for repairs of a building when such repairs cannot economically be justified on the part of an owner? Such issues are part of planning process and if dealt properly, enforcement problems are reduced considerably.

One important difference between Indian Act and similar Acts in USA should be mentioned here. In USA any private person can initiate action forcing the enforcement machinery to act according to provisions of law. He can compel the public official to enforce the provisions of law through mandamus. For example, the District of Columbia, Zoning Regulations (1963) provide, "any neighbouring property owner or occupant who would be specially damaged by any violation may, in addition to all other remedies provided by law, institute injunction, or other appropriate action or proceeding to prevent such unlawful erection or uses, or to correct or abate such violation or to prevent the occupancy of such building, structure, or land." But this is not the case in planning laws in India where public officials may take action after receiving complaints of violation from private parties or a citizen. But there is no provision in law which authorises a citizen to compel him to enforce, particularly when no discretion in the matter exists for him.

It is worth considering whether we should include in Indian Planning and Zoning Acts, similar provision because, there is every likelihood that housing and zoning ordinances would be obeyed more if violation thereof could lead to greater civil liability. Inclusion of such provisions will, however, increase the problems of enforcement.

EXISTING ORGANISATIONAL ARRANGEMENT IN WEST BENGAL

Land Use Control Act, 1965 is being administered in West Bengal by the Town & Country Planning Branch of the

Development and Planning Department of the state government.

Normally a secretary and deputy secretary are responsible to the Minister-in-Charge for the functioning of the Department as a whole, and the Department is divided into three main components :

1. Secretariat
2. Technical Directorate
3. Regional organisation like Asansol Planning Organisation (APO) and Siliguri Planning Organisation (SPO).

The Secretariat Department is manned by non-specialised civil servants of executive and clerical grades with three Assistant Secretaries, one being responsible for control work, besides doing other works as well.

The staff of the Technical Director is of four main categories:

1. Town and Country Planners doing planning work and also enforcement of the CMPA Act in some areas of the Calcutta Metropolitan District.
2. Economists, etc., doing research work.
3. Engineers, architects, etc., preparing projects and also implementing some of them.
4. Traffic engineers preparing schemes for traffic improvement.

At present there are only two organisations outside the Calcutta Metropolitan District. These are A.P.O. and S.P.O. They are responsible for all planning activities within their respective regions. It should be mentioned here that these regions are not planning regions but are large areas demarcated for convenience. The functioning of these organisations have been adversely affected by a number of factors. About a decade ago two outline-physical plans were prepared after meetings and conferences between the planning organisation and other departments of the state government. Public opinion was not obtained to the extent it was desirable leaving communication gaps in the planning process. It is also highly regrettable that the public is not also frequently given an account of policy decisions affecting them at various levels of planning. Therefore

the plans were subsequently criticised and also quite a large amount of resources were wasted because of subsequent problems of enforcement and then finally due to the non-implementation of plans.

The working of the secretariat branch of the Department is shrouded in almost complete mystery. Most of the people working therein have spent most of their working life in an atmosphere of traditional administration rather than in planning administration and planned development. They do not possess the qualities necessary for successful developmental administration in an independent country. As a result public in general suffers and gradually becomes contemptuous to planned development.

At the Directorate level, the town and country planners are probably the most satisfactory part of the machinery who perform their difficult duties of enforcement with utmost skill, courtesy and impartiality.

But in most of the areas of the State, district magistrates are appointed as Controllers for the purpose of enforcement of Land Control Act. Obviously, district magistrates are responsible to the government for their actions and not to the people. This is even more true when plan is prepared without consultations with people. There is no mechanism whereby persons who have interest in and some knowledge of planning for the area could be involved to advise the controllers particularly when the controllers are appointed from amongst non-technical civil servants.

AN ASSESSMENT OF THE SITUATION IN WEST BENGAL

Development planning to town planners is synonymous with town and country planning which is primarily the concern of the Department of Town and Country Planning in each state of India. It is the responsibility of the Department, though in some cases this is yet statutory, to secure consistency and continuity in the framing and execution of state policy with respect to use and development of land. In the states, where the Town and Country Planning Acts have already been passed, the Town and Country Planning Department of the state government is statutorily assisted by various local bodies and authorities in

the attainment of general objectives of planned physical developments of towns and villages. This is not as yet the case in West Bengal where no definite policy has been adopted regarding to planning, implementation and enforcement of physical plans. At present, the responsibility of formulating planning proposals for the state rests with the Town and Country Planning Branch of the Development and Planning Department. But the organisation structure is so deficient that there has not been much progress in the discharge of this responsibility. This dismal situation is also reflected when enforcement of the Land Use Act, 1965, covered even areas for which no physical plan existed. The state government, under the Act, have delegated the power of development control of a planning area to a controller appointed for the purpose. The Secretary to government is entrusted with adjudication in case of appeal.

The effectiveness of enforcement machinery is dependent on the settlement of an important issue relating to the mechanism adopted for planning and development. Who is responsible for planning? For example, if the responsibility of preparing development plans and enforcing and implementing the same rests with a local body or a development authority, then the state government has the right to adjudicate on appeal.

The existence of other statutory bodies dealing with various aspects of development require clarity in their respective role and jurisdiction and effective mechanism of coordination amongst them. For example, Industrial Infrastructure Development Corporation (WBIIDC) can develop any area showing various uses of land. What will happen if there is a conflict between the WBIIDC and the state enforcement machinery? The situation is ripe enough to give rise to conflicts affecting developments. Another example may be given. VIP Road area had been declared a controlled area in 1969. Permission for industrial development had been refused in one particular case in accordance with the provision of law. But pressure has been put by the owner of the private industry who took illegal access without getting formal permission, making enforcement still more difficult. There is a widespread feeling that the enforcement of Land Use Control Act, in this area is not taken seriously. It is of course necessary to recognise that the government is naturally interested in having more employment

opportunities through industrialisation, but the interest of total development, the activities of the public authorities, should reinforce the enforcement machinery in discharging their statutory responsibility. The complexity of problem before machinery increases manifold where there is no development plan for the areas already declared as controlled areas. The problems are somewhat easier where a development plan has been prepared and approved after going through normal process of approval.

But here again the problem of enforcement is dependent upon the degree of details given in the development plan.

Another important point should also be mentioned. Preparation of a development plan needs time. Therefore it becomes sometimes necessary on the part of a controller of a planning area that permission for particular use in a particular plot of land is given or refused or given subject to some conditions. He cannot postpone consideration of an application because the development plan has not yet been prepared. He must decide whether the particular proposal can be sanctioned without conflict with the development plan when the latter is prepared. This is a very difficult technical task and can be suitably dealt with only after the detail development plan is prepared.

SOME SUGGESTIONS

The first suggestion, which I do not think anyone having the understanding of the subject would advocate, is to leave development and changes in the use of land to the forces of demand and supply. The argument against such a negative policy is well-known. This suggestion would save us from having any form of enforcement machinery.

In a modern and densely populated society, physical environment is complex enough needing legal intervention by a public agency. A possible method could be minimum development control under which no attempt is made to plan comprehensively, but only to ensure that no grossly harmful development takes place. If such an approach is adopted, it would require less administrative skill, but will prove impractical in the sense that it would lead to chaos in view of the manifold increase in population and urbanisation. Such an approach may not also fit into broad national or regional framework for

development of human settlements.

Another system may be, in tune with democratic norms, to have committee system of development planning and control (statutory or otherwise). Such committees may comprise of elected representatives and nominated suitable officials to make decisions in the light of development plan and advice tendered to them by experts. Appeal against decisions of such a committee may be heard by the state government.

It might, therefore, be in the interest of efficiency and genuine democratic control, if elected representatives confine themselves to approving general policies, leaving detailed decisions to technical officials, but reviewing at given intervals the effects of their policy. Such a system is expected to speed up administration of enforcement machinery, since members would always remain alive to the burning issues of development control, and would also avoid the rubber-stamping of the planners' recommendations without any actual understanding and practical examination. Such an arrangement will, however, require some change in the present system of managing the government.

The system can be further improved in case where development planning is done by local authority or development authority, by appointing a planner by the state government and deputing him to the local authority both for the purpose of planning and subsequent development control. If sufficiently senior planners are deputed to such development authority with attractive salaries, the arrangement would produce better and speedy decisions than those arrived at by ad hoc authorities or by a Committee of non-professionals or by non-technical individuals. The idea may seem radical, but has much rationality behind it, since I believe that a democratic government if it is to survive can ill afford to be inefficient and arbitrary and also that adjudication on technical details cannot be properly done by persons who have no knowledge of towns and country planning.

The above outline could also be adjusted if regional planning officers are brought into the system of planning and development for a wider area. Some of the state-level functions of coordination and decision making could be delegated subject to overall control by the state government.

DEVELOPMENT CONTROL IN GREATER BOMBAY

M.G. VARTAK

Development control in Bombay may rightly be said to have commenced when the building regulations were introduced in the Bombay Municipal Corporation Act of 1888 and the byelaws were framed under the provisions of section 461 (a), (c), (d) & (dd) of the said Act. These regulations required provision of minimum open space around a building and laid down certain restrictions as to its height in relation to the road width with a view to ensure proper light and ventilation. Further, the maximum height permissible was only 70 feet.

The suburbs and extended suburbs were merged in Greater Bombay in the years 1950 and 1957 respectively and the development in suburbs and extended suburbs was controlled by the specially framed building byelaws, whereunder the built-up area on the ground floor was restricted to one-third the plot area and only ground and two upper floors were initially allowed. In subsequent years, however, ground and three upper floors were allowed. However in majority of the town planning areas as per special town planning scheme regulations, only ground plus two upper floors were allowed.

The building byelaws also laid down the procedure for obtaining the building permissions, building/drainage completion certificates and such other matters. The byelaws also governed the minimum sizes of the sanitary conveniences including water-closets, bath-rooms, their locations, entrances thereto, etc. They provided for structural safety of the buildings, sizes of the rooms, passages, corridors, lobbies, staircases as also their proper light and ventilation, means of access, etc.

The building regulations, incorporated in the B.M.C. Act of 1888 as also the building byelaws framed thereunder, however, sadly lacked the provisions necessary to control the nature and extent of particular type of development in certain localities. Consequently, minimum requirements in effect

became the standards and city was full of intense standards of open spaces, etc., under the building regulations. The city land was intensively utilised for purposes economically best suited to the development regardless of the requirements of the human beings as also of community. Remedial measures naturally followed in an attempt to solve the consequent vexatious problems. The Bombay Town Planning Act, 1915, was enacted but it had certain limitations in as much as its application was not compulsory and was mainly applicable to the areas which were either in the course of development or likely to be taken up for development. The Act, however, did not envisage planning of large town or city like Bombay as a whole and wherein large parts had already developed to standards which were obsolete. The Act was revised in 1954 and its scope was enlarged to enable more comprehensive planning to be taken up. This Act known as Bombay Town Planning Act, 1954, came into force on 1st April, 1957.

THE DEVELOPMENT PLAN AND THE DEVELOPMENT CONTROL RULES FOR GREATER BOMBAY

The Bombay Town Planning Act, 1954 entrusted every local authority with the obligatory duty to carry out the survey of the area within its jurisdiction, to prepare and publish development plan for the whole of the area within its jurisdiction and to submit it to the state government for sanction within four years from 1st April, 1957. The development plan has generally to indicate the manner in which the development and improvement of the area is to be carried out and regulated. The contents of the development plan are to be :

- (i) Proposals for designating the use of land for the purposes, such as : (a) residential, (b) commercial, (c) industrial, and (d) agricultural.
- (ii) Proposal for designation of land for public purposes such as parks playgrounds, recreation grounds, open spaces, schools, markets or medical, health or physical, cultural institutions.
- (iii) Proposals for roads and highways.
- (iv) Proposals for the reservations of land for the purposes of the central and state governments, any local

authority or any other authority established by law in India.

(v) Such other proposals for public and other purposes as may from time to time be approved by a local authority or directed by the state government in this behalf.

The Bombay Municipal Corporation had earlier prepared an outline of a master plan for Bombay in 1948. It had however no legal validity and by 1957, it became out-dated. Moreover the B.T.P. Act, 1954, required much more details to be shown on the development plan than were envisaged in the master plan. The Municipal Corporation, therefore, declared their intention to prepare a fresh development plan for Greater Bombay on 18th September, 1958. Thereafter, the draft development plans along with the Development Control Rules for Greater Bombay were sanctioned by the Municipal Corporation in July, 1964 and were submitted to the state government for their sanction. The state government in turn sanctioned development plan in parts from December, 1965 to January, 1967 and the last parts of the development plan and the Development Control Rules for Greater Bombay were sanctioned by the state government in December 1967.

The Development Control Rules framed alongwith the development plan of Greater Bombay primarily provided for the zoning regulations, open space provisions, the regulations to control intensities of developments, the permissible number of tenements in case of residential developments, the parking and loading-unloading requirements, the regulations regarding means of access, layouts/sub-divisions, etc. Though the Development Control Rules for Greater Bombay are very specific and exhaustive in these respects, they are not comprehensive. They do not cover many other aspects of the building regulations and byelaws hitherto in force, namely, minimum sizes of rooms, sanitary conveniences, their locations, sizes of staircases, passages, corridors, etc. Consequently the Development Control Rules for Greater Bombay are not sufficient and they are required to be used alongwith the building regulations and byelaws framed under the provisions of the B.M.C. Act, 1888. But, if there is any

conflict between the requirements of the Development Control Rules and the requirements of byelaws in force, the requirements of the Development Control Rules shall prevail.

Specific Regulatory Provisions Under the Development Control Rules

The development plan for Greater Bombay as mentioned earlier has allocated the various land-uses and the development control rules framed thereunder specify the different use provisions permissible in the various zones, namely, residential, residential with shopline prescribed along with the street, commercial and industrial. It may be added that the shopping concept of Greater Bombay Development Plan differs from that of Delhi Master Plan to the extent that instead of having centralised shopping at different levels starting from convenience shopping to district shopping centres based on Western style, the Indian shopping habit has been upheld and linear shopping all along selected streets is allowed in Greater Bombay. Sufficient care is taken to ensure that shopping streets are sufficiently wide to cater to traffic needs. The second important provision under the Development Control Rules, different from the earlier building byelaws, is the control imposed on the intensity of development. The different permissible floor space indices in the different use-zones in different parts of the metropolis are distinctly specified. The residential zone shopline prescribed along the street as also in commercial zone, the permissible number of tenements (residential dwelling units) are also distinctly specified to control the density of population more effectively.

The other important distinct provisions under the Development Control Rules are in respect of open spaces, parking, loading-unloading spaces, means of access, balconies, rules for layout and sub-divisions in case of large holdings.

Amendment of the Development Control Rules

As pointed out earlier, the Development Control Rules form a part of the development plan prepared under the provisions of the Maharashtra Regional and Town Planning Act, 1966 (the earlier Bombay Town Planning Act, 1954) which provides for modification of the development plan and consequently the

Development Control Rules framed thereunder. The need for revision of the rules whether by the administration, the practicing architects, the municipal corporation or the members of public is given due consideration and the rules are modified from time to time. Only problem is about the delays in effecting such modifications since the procedure laid down for modification of the Development Plan and Development Control Rules under the aforesaid M.R. & T.P. Act, 1966, is very lengthy in view of the requirement of the approval of the municipal corporation and the state government.

Machinery for Implementation of the Development Control

For controlling the developments in private sector, the Municipal Corporation have set up a separate section known as 'Building Proposal Department' working under the overall control of the city engineer of the Municipal Corporation of Bombay. For this purpose, the Greater Bombay is divided into three zones and for each zone, there are three deputy city engineers, who are also in overall charge of all the engineering matters including building control. Under the deputy city engineers, there are executive engineers meant for exercising the building control alone. They deal with the building permissions in respect of the building proposals submitted by the private and semi-government sectors. The executive engineers are further assisted by the assistant engineers and their subordinate sub-engineers.

The special Building Proposal Branch is the machinery for the purpose of control over urban building activity in Greater Bombay. But due to the tremendous housing shortage, Greater Bombay like all other metropolis, has also not escaped from eruption of slums and more than 2 millions out of total population of 7.3 millions are housed in the slums which have come up regardless of any rules and regulations. The large size of slum dwelling population, their poor economic conditions, socio-political implications and humanitarian considerations do not suggest or permit their demolition and clearance. In fact it is now being realised that slum clearance is not the solution to the problem. The approach now is to improve the environmental conditions of slums. Nevertheless in case of all

other private developments, stricter control is exercised on new developments and also on the additions and/or alterations to the existing structures.

After coming into operation of the Bombay Building Repair and Reconstruction Board, a semi-government organisation in the year 1969, there is a conscious attempt to secure structural upkeep of the old dilapidated buildings in the city of Bombay. With a view to enable the aforesaid B.B.R. & R. Board to rehabilitate all the displaced persons and to provide for their essential amenities the Repair Board is allowed to avail of $2\frac{1}{2}$ times the permissible floor space index (floor area ratio). It is recognised that it is not possible to shift the city population but we can definitely try to improve their environment to make the city more livable. Besides, in view of the large financial resources required, the existing buildings are repaired as temporary measures. Obviously much lower standards have been adopted for the existing island city compared to the presently rapidly growing suburbs and extended suburbs. The Repairs Board is also now made aware to adopt an integrated approach while considering the proposals in the larger context of the surrounding area as a whole rather than tackling individual building in a piecemeal approach. It is expected that the Repair Board while ensuring safety to the citizen of the island city of Bombay, will also contribute towards the improvement of city environments.

The Building Proposal Branch referred to above is decentralised in its working. It operates through ward offices at the field level. The city is divided into 19 wards which are having overall direct control over the private development. It is the responsibility of the ward offices to keep a watch on unauthorised construction, alteration or modification in their respective areas. The building plans are submitted to the zonal offices of the Building Proposal Branch. The copies of the building plans along with the set of sanctioned plans are invariably forwarded to the concerned ward offices so as to make them aware of the new proposals and those of additions and alterations and also to facilitate their effective control on such developments. At the time of sanctioning building plans, the applicants are not made to run from department to department.

But if any comment of any other department of the Municipal Corporation is needed, the Building Proposal Branch obtains the necessary information. The point is that the efficiency with which the building plans are sanctioned and the detection of unauthorized constructions takes place has a substantial bearing on the control of building activity within the city. The citizens would feel tempted to go in for unauthorised constructions, if they feel harassed in the process of getting even their legitimate building plans sanctioned. It is in this context that most of building proposals are sanctioned at the zonal level itself. Only in exceptional cases, they are referred to the city engineer, the deputy municipal commissioner (engineering) and finally to the municipal commissioner. To ensure coordination and uniformity in working of zonal offices, common policy decisions are taken in consultation with all concerned in their weekly meetings under the chairmanship of the city engineer.

The amendments of the Development Control Rules are however dealt with by the separate, centralised development plan department functioning directly under the city engineer and the deputy municipal commissioner (Engineering). Since the deputy city engineer in charge of this department is also attending the weekly coordination meetings, a constant track of the changing requirements and demands of public is always maintained.

Standardization of the Development Control Rules and Building Byelaws at Par with National Building Code

At present the different local bodies are practising different building rules and regulations and there are no standard practices followed by the different local bodies in Maharashtra.

After coming into operation of the National Building Code, the need for standardization of the building byelaws and the development control rules for the Maharashtra as a whole and the five municipal corporations (of Greater Bombay, Nagpur, Pune, Kolhapur and Sholapur in particular) was keenly felt and a sub-committee of the representatives of these Municipal corporations was appointed under the chairmanship of the deputy municipal commissioner (Engineering) of the Municipal Corporation of Greater Bombay. The sub-committee is in the process of finalising draft building byelaws and development

control rules for the municipal corporations in the Maharashtra. When these standardised draft rules and regulations are sanctioned and put into practice, they are likely to contribute substantially to the removal of various deficiencies at present being felt in exercising development control.

CONTROL OF URBAN BUILDING ACTIVITIES IN UTTAR PRADESH

K. SREERAM

Master plan, zoning regulations and sub-division control regulations provide the scope for both regulatory and developmental functions discharged by a local body to meet the important needs of the community in the areas of public health, safety and economic and social well-being.

Under a properly planned zoning regulation, a local authority may establish zones or districts within which its locations, height and bulk of buildings and other structures, the required size of open spaces, the density of residences, business, industrial and other purposes. Thus, zoning is the division of a community into districts for the purpose of regulating the use and development of land and buildings. It is an exercise of the police power directed primarily at the use of private property. While zoning deals with the type of building and use of what may take place on land, sub-division control deals with the manner in which the land is divided and made ready for improvement.

Building regulations also fall into this category. In order to prevent the growth of slums, and check haphazard and unplanned development of urban areas, one of the important powers exercised by local authorities and other urban developmental agencies is the control of urban building activities.

DEFINITION OF THE 'BUILDING'

Under the Municipal Corporation Act the 'building' is defined as a house, out-house, stable-shed, hut and other enclosure or structure, whether of masonry, bricks, wood, mud, metal or any other material, whether used as a human dwelling or otherwise, and also includes verandahs, fixed platforms, plinths, door-steps, walls including compound walls and fencing and the like. It does not include a tent or other such portable temporary structure.

In the U.P. Municipalities Act, the definition of the word 'building' is the same as in the case of municipal corporations, with a slight modification that the last word 'structure' has been changed to 'shelter'.

According to the U.P. Regulation of Building Operations Act, 1958, the word 'building' is used to mean any structure or erection or part of a structure or erection which is intended to be used for residential, commercial, industrial or other purposes, whether in actual use or not.

Yet another Act, *viz.*, the U.P. Awas Evam Vikas Parishad Adhiniyam, 1965 (The U.P. Housing and Development Board Act, 1965) gave a much wider connotation to the word 'building'. According to this Act, the word 'building' includes a house, out-house, stable, shed, hut (other than a hut made of mud appurtenant to or situated in a cultivated field in any area outside the limits of a city, municipality, town area or notified area) or other enclosure or structure whether of masonry, bricks, wood, mud, metal or any other material whatsoever, and includes any verandah, platform, plinth, staircase, doorstep or wall, including the compound wall other than a boundary wall of a garden or agricultural land not appurtenant to a house. However, it does not include a tent or other such portable temporary shelter.

In the Uttar Pradesh Urban Planning and Development Act, 1974 the word 'building' includes any structure or erection or part of a structure or erection which is intended to be used for residential, industrial, commercial or other purposes, whether in actual use or not. The Act also defines building operations to include re-building operations, structural alterations of or additions to building and other operations normally undertaken in connection with the construction of buildings.

Thus, it is apparent that various enactments defined the term 'building' differently and there is no uniformity relating to the definition of the word.

CONTROL OF BUILDING ACTIVITY IN URBAN AREAS IN U.P.

The control of building activities in urban areas is achieved by issuing building permits before the construction begins, by making on the spot inspections and issuing a completion

certificate before the building is occupied. By applying for a building construction, a person is requesting the local authority to permit him to build a building in accordance with building byelaws and regulations in existence. In Uttar Pradesh, construction of buildings in the urban areas is controlled through the following enactments.

- (i) The Uttar Pradesh, Municipalities Act, 1916. Under this Act the municipal boards are empowered to regulate building activities in their respective local bodies.
- (ii) The Uttar Pradesh Nagar Mahapalika Adhiniyam, 1959, which empowers the municipal corporations in KAVAL towns to regulate the building construction activity.
- (iii) The Uttar Pradesh Regulation of Building Operations Act, 1958, which was enacted to provide for the regulation of building operations with a view to prevent haphazard development of urban and rural areas.
- (iv) The Uttar Pradesh Urban Planning and Development Act, 1973, which was passed to meet the need of town planning and urban development.
- (v) The Uttar Pradesh Avas E�am Vikas Parishad Adhiniyam, 1965 (The U.P. Housing and Development Board Act, 1965).
- (vi) The Uttar Pradesh Roadside Land Control Act, 1945, which deals with the control of urban building activities along state highways, etc.

A detailed examination of the above Acts is as under:

U.P. Municipalities Act, 1916

In the urban areas, which are not declared as regulated areas, it is the municipal board which administers the building regulations. According to the U.P. Municipalities Act, 1916, every person intending to erect new building or new part of a building, to re-erect, or make a material alteration in a building, or to make or enlarge a wall, should give notice of his intention to the municipal board. Under the Act, the power to make building byelaw has been delegated to the Municipal Boards. In cases where byelaws are not framed, the municipal board may require a person to furnish a plan and

specifications along with a site plan of the land, with such details as it may consider necessary, within one week of the receipt of the notice. Unless the details asked for are supplied, the notice will not be considered valid. The notice along with the plan is an important document in the possession of the local body. The building regulations will have to be very clear in the requirements for plans, specifications, drawings and other data. Thus, the information supplied along with the application forms part of the notice, and if the person who is constructing the building deviates from the original plan, he could be prosecuted.

The Municipal Board is empowered either to sanction the plan with or without modifications. In the case of a refusal to sanction, the Board is required to intimate the person concerned in writing the reasons for refusal. The Act also provides for sanction by default. For whatever reason, if the Board keeps silent for one month after the receipt of the notice, the person concerned may by a written communication call the attention of the Board to the omission or neglect, and if the Board still keeps silent for a further period of fifteen days, the Board is deemed to have sanctioned the proposed work. In case the sanction is obtained through fraud or misrepresentation, the Board may within six months cancel or modify the sanction granted by it.

In order to avoid nuisance in the areas which are densely populated, where educational or medical institutions are located or where an orphanage having more than one hundred inmates is situated or in any area reserved for residential purposes by any housing or planning scheme, a municipal board cannot sanction construction or addition to any place of public entertainment without the previous approval of the state government.

In order to ensure that the construction of the building is not contravening the sanctioned plan, the Act empowers the President, Executive officer or any other member or officer with specific authorisation by the Board to inspect the works at any time without warning either while under construction or within one month of the receipt of the completion.

In case of illegal erection or alteration of a building, the Board is empowered to prosecute the person and if convicted, he

is liable to a maximum fine of Rs. 1,000 and a minimum fine of Rs. 250. Further the Board is empowered to stop erection and to demolish building erected illegally at any time after a written notice is served.

U.P. Nagar Mahapalika Adhiniyam, 1959

In the case of municipal corporations, the above mentioned provisions, more or less, were included in the U.P. Nagar Mahapalika Adhiniyam, 1959 with minor modification. But after the declaration of KAVAL towns as regulated areas under the U.P. Regulations of Building Operations Act, 1958, the powers of the corporations regarding the building regulations were completely withdrawn. Thus in U.P., wherever the Regulation of Building Operations Act, 1958 operates, the power of the local body relating to the building regulations stand repealed. Now these powers have been taken over by the development authorities.

U.P. Regulation of Building Operations Act, 1958

The U.P. Regulation of Building Operations Act, 1958 was enacted with the following objects and reasons:

It has been observed that there is a tendency of haphazard building construction round about growing towns and ultimately such constructions with no proper means of drainage, water supply, communication and no proper sanitation, affect adversely the town besides being themselves a source of anxiety to the authorities concerned . . . Under the present law, building activity is regulated only within municipalities and notified areas but there is no power to regulate such activity outside urban areas. It appears necessary to take such power through legislation . . . so that if in any area it appears desirable that building activity be regulated to check the aforesaid tendency and for furthering the development of the state the provisions of the enactment may be extended to it.

Under this Act, the state government is empowered to declare any area to be regulated with a view to prevent bad laying out of land, haphazard erection of buildings or growth of

sub-standard colonies or with a view to the development and expansion of that area according to proper planning. Once an area is declared as a regulated area, the government is required to constitute controlling authority for the area. Usually the commissioner of the division or an officer not below the rank of sub-divisional magistrate appointed by the government will be the chairman. Other members to be nominated by the state government include the president of the zila parishad, under whose jurisdiction regulated area or any part thereof lies, the president of the municipality or notified area committee if any, in which regulated area is situated or which is adjacent to it.

The Act also provides for the appointment of a persons or body of persons as 'Prescribed Authority' in respect of the regulated area.

The Act vests power in the state government to get the master plan prepared either through the controlling authority or any other agency for the regulated area. The Act prohibits a person to carry out the development of any site in any regulated area or to construct any building or make or extend any excavation or layout or provide any access to a road in such area except in accordance with the regulations issued under the Act and with the previous permission of prescribed authority in writing. The Act also lays down the conditions under which permission may be refused. In case permission is refused, the grounds of such refusal should be communicated to the person concerned within 90 days of the receipt of the application. If no decision is conveyed to the person concerned within the prescribed time limit, the applicant may by a written communication call the attention of the prescribed authority to the omission or neglect, and even if no action is taken by the latter within 30 days, the permission to the proposed work is considered to have been granted.

The penalties imposed under this Act are much more stringent than the Municipalities Act, 1916. For contravening the provisions of the Act, a person is punishable with a fine which may extend to Rs. 10,000. If the offence is a continuing one, a further fine which may extend to Rs. 500 for every day may be imposed during the period such offence continues. Further, the Act empowers the prescribed authority to direct demolition of an unauthorised construction in addition to any prosecution

that may be instituted against the defaulters. The Act lays down that no court inferior to that of a magistrate of the rank of first class should try an offence punishable under this Act. The order refusing permission is final and cannot be questioned in any court of law. Under the Act, the state government may, at any time either of its own motion or on an application made to it, call for the record of any case disposed of by the controlling authority for the purpose of satisfying itself as to the legality or propriety of any order passed or may pass such order as it considers fit. Further, the state government is empowered to frame rules and regulations.

Till the end of 1977, this Act has been enforced in 29 cities and towns of Uttar Pradesh. The municipal corporation of KAVAL towns being superseded. Administrator of each of the corporations has been declared as the prescribed authority, whereas in other towns, either the sub-divisional magistrate or additional district magistrate has been declared as prescribed authority. As mentioned earlier, in all these local bodies where this Act has been enforced; the powers of the municipal corporation, municipal boards relating to the regulation or control of building operations remain suspended. The prescribed authority has its own machinery to operate under this Act.

Uttar Pradesh Urban Planning and Development Act, 1973

The Uttar Pradesh Urban Planning and Development Act, 1973 was enacted to provide for the development of certain areas of Uttar Pradesh according to plan. This Act empowers the state government to declare any area which it feels necessary to develop according to a plan as development area. In the development area, a development authority may be constituted by the government with the following membership:

- (i) a Chairman to be nominated by the state government;
- (ii) a Vice-Chairman;
- (iii) Secretary, Department of Housing;
- (iv) Secretary, Department of Finance;
- (v) Chief Town & Country Planner;
- (vi) Managing Director, U.P. Jal Nigam;
- (vii) District Magistrate of the district in which the development area is situated;

- (viii) four members of the municipal corporations to be elected from among the corporators; and
- (ix) such other members not exceeding three as may be nominated by the state government.

The Vice-Chairman will be a full-time appointee.

The Act also provides for the constitution of an advisory council for the purpose of advising the development authority on the preparation of the master plan and on such matters relating to the planning of development.

The object of the development authority is to promote and secure the development of the area according to plan. In order to achieve this objective, the authority is empowered to prepare a master plan, defining the zones into which the development area is to be divided for the purpose of development, indicate the land-uses and to serve as a basic pattern of framework within which the zonal development plans of the various zones may be prepared. Along with the master plan, the authority is required to prepare for each of the zones, the zonal development plan indicating the site-plan, use-plan for the zonal development showing the approximate locations and extend of land-uses for housing, recreation, public building, industry, business, etc. The zonal plans should indicate apart from other things, the division of any site into plots for the erection of buildings the erection of buildings on any site and the restrictions and conditions in regard to the open spaces to be maintained in and around buildings and height and character of buildings, the architectural features of buildings of any site, etc.

One important provision in the Act is that the authority may require an occupier to repair, white-wash, colour-wash or paint the facade of the buildings abutting the arterial roads at his own cost. In case the owner fails to do so, the authority may itself carry out the work and recover the cost from the occupier.

When once an area is declared as development area, no development of land can be undertaken without getting the written permission from the authority in accordance with the master and zonal development plans. The penalties provided for infringement of the provisions of the Act are the same as under the Regulation of Building Operations Act. The authority also has power to issue directions for the demolition of unauthorised

construction. The final authority in this respect is the Chairman and his decision cannot be questioned in any court of law.

Uttar Pradesh Avas Evam Vikas Parishad Adhiniyam, 1965

The U.P. Avas Evam Vikas Parishad Adhiniyam, 1965 (The U.P. Housing and Development Board Act, 1965) was enacted to provide for the establishment, incorporation and functioning of a housing and development board in Uttar Pradesh. The Act provides for the constitution of a board by the state government called the Uttar Pradesh Avas Evam Vikas Parishad with a Chairman, who should normally be a non-official and other official and non-official members. In order to enlist the cooperation of the local bodies where the Housing Board undertakes various schemes, the Act provides for the constitution of Avas Samitis comprising of a Chairman, who in the case of the Corporation is the Mayor, in the case of Municipal Board, the President and in the case of any other area, the President or Chairman of any local authority having jurisdiction in that area to be appointed by the state government and such other members. One of the important functions of the Board is to frame and execute housing and improvement schemes and other projects and to regulate building operations. This power of regulating the building operation extends to the private construction undertaken by individual within the Housing Board colonies. The Act prohibits any person to erect, re-erect, add to or alter any building so as to make it project into the defined alignments of the street except with the previous permission of the Board in cases where the Board has announced a defined street scheme. Where the Board frames a Prasar Yojana (Expansion Scheme) in order to control and to provide for the future expansion or development of any urban area, no person should erect, re-erect, add to or alter any building within the area included in the scheme without previous permission of the Board. In cases where a slum improvement and clearance scheme is published, no person should erect, re-erect, add to, alter any building or otherwise develop any land in the area except in accordance with the schemes and with the previous permission of housing commissioner who is empowered to impose any condition or restriction as he considers fit while giving sanction.

The Act provides for the same penalties for building in

contravention of schemes as in the Regulation of Building Operation Act and the housing commissioner is empowered to direct the removal of unauthorised erections.

Uttar Pradesh Roadside Control Act, 1945

Yet another act which is little known, but applied extensively throughout the state is the U.P. Roadside Land Control Act, 1945. This Act is intended to deal with the problem of ribbon development which is becoming more serious than before. There is a growing tendency to extend buildings along roads around towns with the consequence that congestion on such roads is becoming acute. Roads intended to enable through traffic to by-pass centres of dense population, themselves becomes too over-crowded. Extra municipal areas adjoining main roads have obvious attraction as building sites. The occupants of buildings in such areas can enjoy many of the amenities of town life without sharing the burden of municipal taxation or being subject to the control required to ensure good sanitation and well-ordered development.

Under this Act, the state government is empowered to declare any land within a distance of four hundred and forty yards from the centre line of any road to be a controlled area. Any person intending to erect or re-erect any building or make or extend any excavation, or layout, any means of access to a road in the controlled area will have to take the previous written permission of the district collector. In case permission is refused by the collector, appeal lies to the state government whose decision is final.

CONCLUSION

Thus, it is evident from the foregoing pages that there are different enactments in Uttar Pradesh for controlling the building activities. Each Act provides for a different agency to administer the building regulations. Building regulation which has been considered as traditional function of municipal local bodies continue to be with them in those local bodies where the Regulation of Building Operations Act, 1958 has not been made operative. When once the Act comes into force in any urban local body, the building regulation powers are withdrawn from

the local body and transferred to the prescribed authority to be nominated by the state government. Except in the Municipal Corporations, in the rest of 24 urban local bodies where the Act has been made operative till the end of 1977, it is either the subdivision magistrate or additional district magistrate who has been nominated as the prescribed authority by the state government. They enforce the building regulations through their own machinery. To that extent, the urban local body loses its regulatory powers and this loss is a source of friction between the local body and the prescribed authority under the Act.

The situation has been further complicated with the enactment of the U.P. Urban Planning and Development Act, 1973. This Act provided for the statutory development authorities to be set up by the government to prepare, supervise and implement the master plans. In the first instance development authorities were set up in KAVAL corporations in 1974. Since then, seven more development authorities were set up in different urban areas in the state. When once the Authority is set up in a city or town, the Regulation of Building Operations Act ceases to operate and the Vice-Chairman of the Development Authority takes over the control of building activities in that town or city according to the provisions of the master plan. The development authorities are required to frame regulations and byelaws. Since none of the development authorities have done this so far, they have adopted the same regulations and byelaws prepared under the Regulation of Building Operations Act. Within any urban area, the Housing Board colonies stand on a different footing. The plans for the colony are sanctioned by the state government on the technical advice of the Town and Country Planning Organisation. Within the colonies, private building constructions are controlled by the Housing Board. Neither the local body nor the development authority has any control. The control of 'ribbon development' is exercised by the district collector through the machinery of the Public Works Department of the state government.

The control of urban building activities in urban areas which are working under the Regulation of Building Operation Act or Urban Planning and Development Act is more effective when compared to local bodies because the former agencies have competent staff. But the real difficulty arises in the case of medium

and small local bodies. They do not have necessary expertise to draw up the byelaws. Hence they adopt the model byelaws prepared by the state government with or without modification.

Since municipal limits are confined usually to built-up areas, the possibility of the municipal boards controlling the building activities outside their limits presented a problem. The inadequately qualified staff worsened the situation further. All this led to the creation of different agencies under various enactments to control the building activities. This raises an important question whether it is desirable and necessary to overlook the established local institution in favour of special purpose authorities. In order to answer this issue an in-depth and objective analysis of the effectiveness and efficiency in the working of these special purpose authorities to check the haphazard and unplanned growth of urban areas is necessary.

ENFORCEMENT OF DEVELOPMENT CONTROL : AN ALTERNATIVE APPROACH

M.S. MEHTA

The enforcement machinery of municipal government, so far building activity is concerned, plays most important part in all cities and towns. In present day's fast developing urbanisation and the democratic set-up that we have, the enforcement machinery has virtually failed in their efforts, giving rise to unlimited unauthorised constructions. The unauthorised constructions have resulted in hundreds of unauthorised colonies. It is high time that some solution or method is adopted which could help in systematic development, yet at the same time giving boost and encourage the building activity instead of creating hurdles. It is most astonishing that in spite of tremendous building activity, the backlog in housing has multiplied from year to year. It is not intended to prove that the backlog is due to faulty enforcement machinery. Of course there are various other reasons for it and we are happy to note that the government is now more vigilant about it and has expressed its intentions to boost the house construction activity.

In all big cities, including Delhi, there are well laid out building byelaws and zoning regulations of which the architects, planners and engineers, particularly those practising in the field are supposed to be aware of. To have one qualified architect or planner or an engineer, the nation has to spend anything about Rs. 30,000 per person. There is no reason why a person available on such a high cost is not made use of by the society to the maximum extent. The well qualified people practising in the field should be given free opportunity to design and construct a building within framework of building byelaws and zoning regulations. Once he is made conscious of the responsibilities and the background he has in the science of building art and engineering, we are bound to have better results in the form of good, well designed buildings constructed within the framework. This procedure if followed, will result in: (i) great saving in enforcement machinery, (ii) time spent

in obtaining approval from the local authorities, and (iii) free hand in utilising artistic talent.

Presently, the plans are submitted to the local body for approval where the scheme has to pass through a long pipe line before it is flushed out and reaches back to the applicant. If a proper study is made of the expenditure and the time devoted by the manpower, while the scheme is in the pipe line, one will simply be astonished at the results. In addition, the time and money spent by the applicant are enormous. That is not the end, before the house is completed and occupied there are many more formalities, like completion certificate and permission to have water, sewer and electricity connections. It is, however, important to mention here that the problems are not one way only. They are generally found to be both ways, i.e., from the side of the applicant as well as the approving authority. To simplify the whole system, could we not, even on experimental basis, leave the architect, builder and the owner to put up their house within the framework of building byelaws and zoning regulations? I am sure, in any of the newly developed or developing colonies, the suggested procedure will work more harmoniously and to the advantages of both, the builder and the approving authority. In this system, only at the completion stage, the completion plans should be submitted to the approving authority with all relevant plans, elevations, sections, showing service lines, etc., together with photographs in duplicate. The building fee has also to be submitted along with various documents. These documents in the form of the horoscope of the building, are to be maintained by both parties, the owner and the approving authority, to be utilised whenever required in future. Before returning one of the sets of the documents to the applicant, the approving authority will closely examine the construction done and put a stamp over it. Any construction done beyond the permissible limits or against zoning regulations would be liable to demolition and cancellation of the license of the designer or such other actions, to be worked out in detail.

Let us also discuss the possible point of view of the approving authority. The very first argument would be : Once a building has been constructed, what could be done at the time of completion certificate? The answer lies in the question what

happens when a builder who has constructed something against the plans approved by the approving authority? But I must hasten to add here that once the suggested system is adopted, the chances of violating byelaws and regulations will be reduced to astonishing low level. Given the status and background of architects, planners or engineers involved in the new system, and consequences of interntional deviations I am sure, they will not indulge in violations of the laws. The fear of difficulty in realising building fee could also be advanced, but as already explained, the building fee will be submitted along with the application for completion certificate and unless one has the completion certificate with him, he will neither get the water connection nor the electricity and the house will continue to be uninhabitable.

To introduce new system it would, however, be necessary to make amendments in the Act and the regulations governing byelaws, etc. The changes to be effected will have to be done very carefully, keeping in view that number of people presently practising as architects, engineers and draftsmen may not all fit in suggested procedure. Yet at the same time, it would not be desirable to throw them out of job. Such category of persons who are not fully qualified, and who may not be considered for being given free scope for designing and constructing, could continue to work in the present framework which would be suitable for unplanned areas and scrutiny of individual plan is necessary at initial stages. This will provide opportunity for all presently practising persons although not qualified. Such category, should gradually get reduced in number and ultimately only well-qualified architects, planners and engineers will be there to serve the society and practise as architects and designers.

Therefore, to start with, modifications may be introduced in the Act and byelaws, etc. The well planned colonies will be put under new system while the old areas as the regularised colonies which have come up in unplanned areas can continue to have present system.

PROBLEMS OF DEVELOPMENT CONTROLS

K. THOMAS POULOSE

The primary objective of city planning is to create suitable physical environments which ensures conditions of living with comfort, convenience and safety of the people. This is sought to be achieved by the physical planner through endeavours to provide "a place for everything and to have everything in its place". Even if he succeeds to provide the right amount of land for each use in the right place, which he does in the most democratic way, *i.e.*, in consultation with the people, his work will become futile if later decisions are in violation of the predetermined paths. The achievement of the goals contemplated in the development plans depends to a large extent, upon the determination and zeal with which the people discipline themselves to ensure that the guidelines and directives envisaged in the plans are followed.

A plan is implemented both by positive actions, *viz.*, execution of schemes and by negative actions, *viz.*, preventive and restrictive measures. The process by which the total implementation of the plan is secured through various agencies is called development control. In other words, it is the control of development in accordance with the proposals in the plan. The plan is of no use if the proposals in the plan are not put into practice. Wherever space has been reserved for future use, development in such areas has to be controlled. Considerable saving in public money can be achieved by reserving and keeping clear of development the routes of future roads and the sites of future important developments. Areas of natural beauty have to be preserved by refusing permission for development. Development controls also include measures to ensure that a building may not create inconvenience to the nearby land and buildings. Although the individual may not be interested in the convenience of his neighbour, the authorities have to safeguard the interests of all citizens. The common interests of the general community should have preference over individual and sectional interests.

It is well known that controls in any context are unpleasant and liable to be resisted. If we analyse the real cause, it is not difficult to realise that selfish motives and vested interests are the culprits behind all resistance against controls, however reasonable and desirable they may be. As one who has been in the field of physical planning for over two decades, I have had interesting experiences in the matter of development controls. The pitiable fact is that, in majority of cases the selfish claims of individuals are upheld against the dictates of the plan and the interests of the community. And then it is complained that the plans have failed and that they are useless. This indeed is a paradoxical situation. It is the duty of the planner and all those connected with planning to face this challenge by educating the people and those who take decisions on behalf of the people.

Even the President of the Institute of Town Planning, India, the premier body representing almost all town and country planners in the country, recently complained that, "a fairly large number of Master Plans have been prepared for many of our cities in the last two decades. Most of these plans have unfortunately been able to achieve little due to a variety of reasons". In other words "the operation was successful, but the patient died". The reasons are well known. All those involved, including the patient and his bystanders have to share the responsibility. Thomas Sharp the well known English town planner observed, "A city has the same right as a human patient to be regarded as an individual requiring personal attention rather than abstract advice. In this context, it is the role of a town planner to act as a doctor. But many conditions have to be satisfied for the treatment to be successful. The doctor should be competent; the tests and investigations should be made carefully and correctly, the medicines should be unadulterated and administered in time in correct doses; the nursing should be good and above all the patient should cooperate with the doctor and submit to his directions and instructions. Once recovered, the patient should not repeat the past mistakes and should comply with whatever directions are given for his own happy and healthy life."

The success of implementation of any development plan depends not only on the availability of funds but also on the

efficiency and effectiveness with which the inevitable controls are enforced without permitting serious departures from the provisions of the plan. The plan is made in consultation with the people and once decided upon, it should in its essential features be adhered to. Even though delays are likely to occur in the execution of the various schemes envisaged in the plan due to a variety of reasons including paucity of funds, there should not be any slackness in enforcing the development controls. Absolute conviction in the usefulness of planning and courageous action on the part of the implementing agencies are prerequisites for the successful implementation of plans. In fact, land-use planning is one of the most progressive ideologies and a social movement and hence it should be regarded as a socio-political subject rather than a purely technical discipline.

Right from the beginning of the post-independence era, we have realised the ill-effects of rapid urbanisation and uncontrolled urban growth. Balanced regional development by the extension of the benefits of economic progress to the less developed parts of the country and diffusion of industrial activities have been accepted as the main objectives of our national planning exercise. The need to integrate economic planning with physical planning has also been rightfully realised. Further, the town planners have prepared hundreds of development plans, for guiding the future growth of urban communities in the country. It is high time that we make a serious analysis of our accomplishments and take decisions on the future courses of action.

CONTROL OF URBAN BUILDING ACTIVITIES IN AMRITSAR

GURPRATAP SINGH

An attempt in this paper has been made to highlight, in brief, the various aspects of control of urban building activities in the city of Amritsar. While describing the "Land Use Controls for Old Built Up area", it is intended to illustrate the general problems of older parts of the cities and a strategy for enforcing land-use controls for improving the conditions thereof. Further, height and bulk relationship, appearance and shape in respect of old and new parts of the cities, have also been described in general, in the section dealing with "Building Bulk—Appearance and Shape". The part on "Squatting on Public Lands," includes the causes of squatting on public lands, kind of squatting, and recommendations for removing it. The fourth aspect, *i.e.*, "Enforcement Machinery for Development Control" includes the present set-up of enforcement machinery as well as present development controls and shortcomings thereof.

LAND-USE CONTROL FOR OLD BUILT UP AREA

With the rapid urbanization and passage of time different urban areas originated in different periods with different intensity of problems. As a result, the older parts of the towns which are the result of unplanned development since ages become quite different as compared to new parts of towns with respect to their physical and socio-economic characteristics. The older parts of the towns/cities consists of unconforming and confused land-uses due to the fact that various functional areas emerged over a number of decades when the need arose in response to the population growth. Now these areas are also suffering from unbalanced development which has resulted in extreme congestion in the urban core, shortage of housing, development of poorly situated or unbalanced neighbourhoods, persistence of slums and blighted areas, existence of shops on either side of the roads without parking facilities which has created

traffic hazards, defective circulation and traffic bottlenecks and level crossing seriously delaying traffic jams, negligible outdoor public recreational facilities such as organized parks, playgrounds and open spaces, inadequate and unequal distribution of public amenities and services, unorganised location of public/government offices and lack of water supply, sewerage and drainage facilities.

The problems of central areas of the cities which are the focus for social and cultural activities of mankind, cannot be solved without the enforcement of land-use control. Land-use controls are of utmost importance for protecting the particular use zone against the invasion of non-conforming uses and thereby promoting public health, safety, general morale and welfare of the community. In fact, the land-use controls are the legal regulations through which police powers of the state are exercised to ensure utilization of particular land or buildings in accordance with the master plan of the area. In order to improve the central parts (older parts) of the cities through land-use control, strategy should be: (a) to shift non-conforming land-uses to their respective use zone, and (b) to redevelop older parts through conservative surgery.

(a) Shifting of non-conforming land-uses: At present the older parts of the towns are characterised with unconforming land-uses. For example, in the walled city of Amritsar, the industries, shops, educational/medical/institutions are working side by side creating nuisance in the localities. In order to enforce land-use control, all the non-conforming uses should be discontinued or shifted to their respective 'use area' or made conforming in accordance with the provisions of master plan in a phased manner. In the walled city of Amritsar, the trade in primary produce and bulky materials (e.g., grain, iron and steel, timber and fodder etc.), goods transport as well as manufacturing should be shifted out to their respective use zones.

(b) Redevelopment or urban renewal of older parts of cities through conservative surgery: In order to enforce land-use control as well as development control, the older parts of the town are to be renewed through the principles of "conservative surgery", i.e., only the decayed areas are to be cleared and redeveloped and buildings and areas in good condition are to be conserved and further improved with adequate community facilities

and circulation to improve the living and working conditions. In case of walled city of Amritsar, the older parts will be improved/redeveloped by preparing/executing various development and improvement schemes under the Punjab Development of Damaged Area Act, The Punjab Town Improvement Act and The Punjab Municipal Corporation Act.

BUILDING BULK, APPEARANCE AND SHAPE

In order to preserve adequate light and air for interior spaces, a good relationship between buildings and open spaces is required. The necessity for space around building, is based on the building floor space in relation to exterior circulation, *i.e.*, streets, side walls and parks which are critical factors for determining the height and bulk of the buildings. In Amritsar city, the height and bulk relationship is changing from one part of the town to another part. The older parts of the town are the result of unplanned development and associated with highest densities of population. Height and bulk relationship change as the population of the city increases. As a result, in general 4 storey buildings are found with no space around building, *i.e.*, with no side, rear and front set-backs in the walled city of Amritsar. Thus, lacking fresh air and light, the row housing in the walled city of Amritsar are hazardous to health. The newly developed parts of city, include two types of areas (*i*) planned area and (*ii*) unplanned area. In the planned area, the areas which have been developed through town planning and development scheme, a good relationship of height and bulk has been maintained. However, this relationship has not been maintained in unplanned areas.

Appearance of the buildings are dependent upon the factors of land-scaping of surrounding roads and areas, planned buildings, facade and building control applied for and material used in the buildings. The old parts of the town, due to deteriorated structures situated on zig-zag narrow roads without land-scaping and in the absence of development/architectural control do not reflect good appearance except in case of religious/historical monuments.

Thus, the absence of height and bulk relationship due to unplanned development, and appearance of buildings due to

deteriorated condition of buildings resulting in their obsolescence and inhabitability are the strongest factors for calling urban renewal.

SQUATTING ON PUBLIC LANDS

The term squatting means unauthorised possession and construction on public land. There are three main reasons for squatting on public lands :

- (i) Due to lack of a positive programme, the gap between demand and supply widened as the demand for plots for commercial, residential and other purposes were not fully met.
- (ii) The unauthorised construction on public land was not checked by the enforcement machinery. Moreover, in the absence of any checking, the government land can easily be occupied as compared to private property. That is why there is extensive unauthorised construction and illegal occupation of government land.
- (iii) Due to high cost of land and construction of building, persons belonging to economically weaker sections find shelter on public land by raising temporary huts.

There are two types of squatting: (i) on roads, foot paths and commercial streets by the shopkeepers and rehriwalas (hawkers), and (ii) on vacant public land for the purpose of residence. In Amritsar city, a good amount of nazool land is illegally occupied. In the city, the squatting on roads, foot paths and on commercial streets has caused traffic hazards. Thus squatting on public land is one of the main problems which should be checked in the public interest.

In order to check the squatting on public land following measures should be taken by the civic bodies.

- (i) Adequate space should be given to the squatters at suitable places for their resettlement and they should be shifted accordingly.
- (ii) There should be a strict control and regular vigil on public land for checking unauthorised possession and

construction.

(iii) All government land should be developed immediately.

ENFORCEMENT MACHINERY FOR DEVELOPMENT CONTROL

In order to describe the present enforcement machinery for development control, one has to look into the functioning of various development agencies working in Amritsar under the provisions of different Acts. Generally in Amritsar city, no land-use control is practised due to lack of statutory provisions of land-use control/zoning regulations without which no haphazard development can be checked. However, some development controls are being enforced under various Acts, as mentioned below, by different development agencies in an isolated manner.

Municipal Corporation

The Municipal Corporation prepares the: (i) town planning schemes for unbuilt areas, (ii) schemes for built-up areas, and (iii) general improvement schemes for unhealthy/uninhabitable areas. In these schemes the Corporation enforces its development controls. However, the areas which do not fall under the above schemes but are situated within the municipal limits, the development controls are governed by the building byelaws prepared by the Corporation. However, the Corporation is unable to enforce the land-use control.

Town Improvement Trust

Town Improvement Trust, Amritsar can prepare general improvement scheme and rebuilding scheme, street schemes and deferred street schemes, development and expansion schemes, housing accommodation schemes, and rehousing schemes under the Town Improvement Act and the Punjab Development of Damaged Area Act. Thus, the Trust enforces the development control only in the areas falling under the above schemes. The Improvement Trust has the power of taking possession of land under schemes in the walled city of Amritsar without remitting payment of the awards before possession. Therefore, the schemes could not be delayed by reason of acquisition.

Housing Boards

Under the Punjab Housing Board Act, the Housing Board can also execute all or any of the schemes mentioned in para (ii) above. Thus, Housing Board also enforces the development control in its respective area.

Punjab Government

In the periphery of the city, three controlled areas (recently, some parts have come under municipal limits) were declared by the Punjab Government under Punjab Scheduled Roads and Controlled Areas Act to check the haphazard development in the periphery of Amritsar city. Similarly the Government (Urban Estate Department) can also develop any pocket under Urban Estate Act. In these areas, Punjab Government enforces development control.

Thus, in Amritsar city, four development agencies are working in isolation to each other in enforcing development control. Impact of development controls individually or when taken together is not the same as it is expected. This is due to following reasons.

Lack of Suitable Planning Legislation

The various acts and byelaws in force at present are outdated and obsolete. The Municipal Act came into force in 1911 and Building Byelaws in 1958. They do not take into consideration the technological and scientific developments achieved since then and also the change of various requirements from old days of 1911 and 1958, thereby making them ineffective and useless. For example:

- (i) Provisions of reservation of 25 per cent land under streets and open spaces in Town Planning Schemes is quite on low side thereby leaving no space for public utilities, amenities and facilities and also providing no scope for commercial scheme.
- (ii) Most of the Town Planning Schemes are not executed within required time as under the Municipal Act, there is no binding on the private individual to convert his land in accordance with the sanctioned Town Planning Scheme.

- (iii) The Punjab Scheduled Road and Controlled Areas Act also remained unable to check the haphazard development in the controlled areas declared within 8 kms. around various urban centres due to the fact that there are some loopholes in the Act itself and implementing machinery.
- (iv) The schemes are delayed under Town Improvement Act, as there is no legal power with the enforcement authorities in case of stay orders.
- (v) Under all the Acts, the penalties, in case of violations are inadequate and sometimes make controls ineffective as lump-sum amount is taken as fine for violation of any law and the building is allowed to remain as such, which encourage people to violate building laws.

In the state, there is no comprehensive planning legislation which must tackle the various urban problems including zoning regulations and all development controls.

Poor Enforcement of Schemes and Lack of Coordination Amongst Various Agencies

The enforcement staff of the various implementing agencies is inadequate. In spite of existing laws, the local bodies remain unable to check the misuse of land and unauthorised development and construction due to lack of adequate staff. Under the Municipal Act, the local body is authorised to ask owners to pave, metal and provide utility services at their cost and then declaring it a public street for its maintenance but this section has never been made use of except in few cases. Sometimes, in the enforcement of the schemes, it has been identified that due to political interference and self-interest, unauthorised constructions are coming up. Moreover, when no proper action is taken in cases of unauthorised building activities in various areas, it causes resentment in public and also encourages increase in such activities.

Inadequate Technical Staff

Inadequacy of technical staff has also given rise to delays in preparation of various schemes, in response to

the increasing public demands, thus encouraging unauthorised development.

Other Major Factors

- (i) There is no coordination amongst the multiplicity of agencies and between formulation and implementation of plans.
- (ii) There is usually no public participation in various stages of planning which causes lack of awareness of development control amongst the public.

SUGGESTIONS

Following suggestions are made for controlling the land-use in a town/city:

1. Various agencies responsible for acquisition, development, control and registration of land should be brought under a unified set-up to avoid delays and lack of coordination or alternatively suitable coordination mechanism should be worked out between these agencies.
2. Comprehensive town planning law should replace existing laws and byelaws for avoiding multiplicity.
3. Various Acts and byelaws should be amended to suit the existing social, economic and physical conditions and such regulations should be re-examined after every 5 years.
4. An amendment should be made under section 192 of the Municipal Act 1911 enabling upto 40 per cent area for roads, parking and open spaces in case the Town Planning Scheme is prepared for commercial purpose. Moreover, there should be a provision enabling the enforcement authority to enforce the individual owner for compulsory converting the use of land in accordance with sanctioned T.P. Scheme within the prescribed time after the scheme has been sanctioned.
5. Penalties for violation of Acts should be severe, so as to discourage unauthorised development. These developments should not be allowed to continue after imposition of penalty, except in very appropriate cases.
6. The staff with local authorities should be adequate and

technically sound to enforce the development control.

7. There should be regular checking of misuse of land, unauthorised construction and unplanned and haphazard development. Any person/authority/corporation/department violating any control should be duly dealt with.

UNAUTHORISED CONSTRUCTIONS AND CONTROL ON URBAN BUILDING ACTIVITIES IN DELHI

J.D. GOYAL

B.B. NANDA

While on one hand, process of urbanisation is not only desirable but essential for generating economic growth and social changes in a developing country, yet on the other hand it generates a series of administrative, social, economic and physical problems. The trend of urbanisation in India is indicated in Table 1 given below :

TABLE 1 URBAN POPULATION TRENDS IN INDIA

Year	Total population in Millions	Urban population in Millions	Urban population as percentage of Total
1901	238.4	25.8	10.8
1911	252.1	25.9	10.3
1921	251.3	28.1	11.2
1931	279.0	33.5	12.0
1941	318.7	44.2	13.9
1951	361.1	62.9	17.3
1961	439.2	78.9	18.0
1971	547.8	109.1	19.9

The national growth rate of population of India is about 2.4 per cent whereas the rate of increase of population in case of urban areas in India is 3.8 per cent. The rate of increase of population of Delhi, however, is much more than the national average as will be apparent from Table 2 on next page. The rate of increase of population of Delhi for a few years has been of an order of about 6 per cent.

TABLE 2 INCREASE OF POPULATION OF DELHI

Year	Population
1901	405,819
1911	413,851
1921	488,452
1931	636,246
1941	917,939
1951	1,744,072
1961	2,658,612
1971	4,065,698

Housing Requirements

At the time of formation of Master Plan in 1962, the population of Delhi by 1981 was projected to be 45 lacs. There were about 25 lacs existing dwelling units and it was estimated that 7.5 lacs additional dwelling units will be needed. The present population of Delhi is more than 56 lacs and is likely to be about 60 lacs by 1981. The requirements of dwelling units will, as such, be 10.5 lacs against 7.5 lacs assessed originally.

The Government of India had constituted the Delhi Development Authority under the Delhi Development Act, 1957. This authority is primarily responsible to develop land for plots and to construct houses to meet the needs of the city. The achievements so far have been as under :

(i) General residential plots	50,000
(ii) Allotment to Cooperative Societies	35,000
(iii) Plots built under various categories	32,000
(iv) Slum tenements	14,000
(v) J.J. tenements	5,000
TOTAL:	1,36,000

In addition, 2 lacs plots have been provided under the J.J. Removal Scheme and in the resettlement colonies which have been recently developed. From the achievements, it does not appear probable that in the near future, it will be possible to provide the dwelling units/houses to meet the requirements.

Unauthorised Constructions

Delhi Development Authority is responsible for the control of building activity in areas declared as 'development areas' under Section 12 of the Delhi Development Act, 1957. In respect of areas not declared as 'development areas', the building activity is controlled by the Municipal Corporation of Delhi. The Municipal Corporation of Delhi under Section 507 B(1) had exempted the rural villages within the Lal Dora limits from the provisions of Section 533 (1) and 334 (1) of the D.M.C. Act in respect of residential houses and shops, etc.

The Municipal Corporation has nearly one lac cases of unauthorised construction under action. The unauthorised constructions keep growing at the rate of nearly 25 constructions every day. The reasons for this large scale illegal activity are quite apparent from the statistics which have been provided regarding the increase of population of the city and the slow rate at which the housing stock is being added.

ENFORCEMENT

One might feel that the Municipal Corporation of Delhi must have been armed with adequate legal provisions to check this illegal activity. Under the provisions of Section 344 D.M.C Act, 1957, the Commissioner has been empowered to require any person at whose instance the building or the work has been commenced or is being carried on to stop it forthwith. If this order is not complied with, the Commissioner may require any police officer to remove such person and construction from the premises within such time as may be specified in the requisition. The law also provides for the deputing of police officer or a municipal officer to watch the premises in order to ensure that the erection of the building or the execution of the work is not continued. Under Section 343, a direction can be given to the builder to stop the construction and also the unauthorised building can be ordered to be demolished by the builder himself and on his failure to comply with this order, the demolition can be carried out by the Commissioner. The appeal against the order lies with the Court of District Judge and other courts have been barred from entertaining appeals against the demolition order.

However, the experience has been that stay orders are obtained from various courts under other provisions of the law and the Commissioner is restrained from taking demolition actions. The police has its own administrative difficulties and it has not been possible to depute police generally for checking the unauthorised constructions. The demolition operations are met with serious resistance from the public as well as the public representatives. A demolition operation which could be carried out earlier by a junior engineer alongwith about 8-10 demolition workers and 8-10 police personnel, has now to be planned to be carried out under the supervision of a magistrate, senior police officers and senior officers of the municipal corporation.

SUGGESTIONS

The existing provisions of the law are being considered for amendment and under-mentioned suggestions are being made :

- (a) Carrying out of unauthorised construction should be made a cognisable offence.
- (b) Powers may be vested at certain level of the officers who may pass summary orders for demolition instead of following the legal procedure as has been laid down under Section 343 of the D.M.C. Act.
- (c) Erection of building without the sanction should not only attract the penalty of fine but should also attract penalties like imprisonment.

The prime consideration for migration of rural population to the urban areas is the employment potential of these urban centres. The present government is contemplating to lay more emphasis on development of employment opportunities in rural areas.

In view of the limited land resources of Delhi, it is absolutely necessary that intensive use of the existing land should be made. The present provisions of the master plan as well as the building byelaws in respect of the number of storeys permissible and the permissible coverage need to be reviewed. The municipal corporation has already set up a Committee known as Ad hoc (Amendment to Master Plan and

Building Byelaws) Committee and this committee is looking into this aspect at present.

Suitable amendments may be made to the municipal enactments to see that laws are swift and sufficiently punitive with a view to have effective building and development control in urban areas.

The pace of development of the town extension schemes should be made much faster so that additional housing sites and additional plots are made available to the public. These plots should be available at a cost within the means of the citizens.

APPENDIX I

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